● BLAUPUNKT
Bosch Telecom

Video Camera Recorder
CR-8800 H 7 618 754

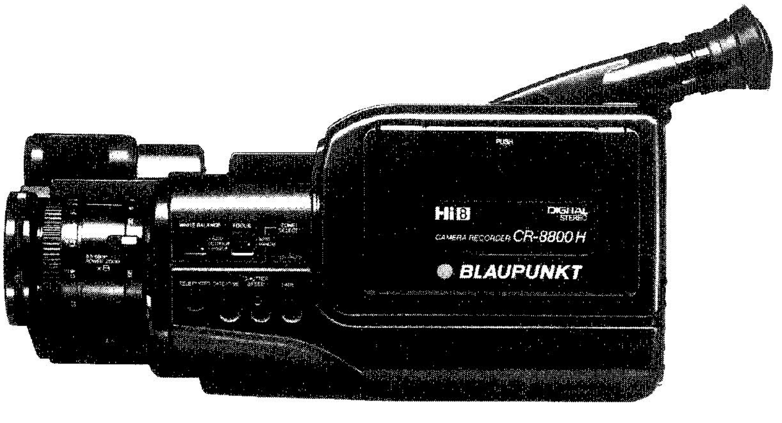
Netzadapter / Power Adaptor
PC-8800 8 627 105 422
Akku / Battery Pack
AX-8000 7 618 670
Sonderzubehör /
Optional Accessories

Kundendienstschrift • Service Manual

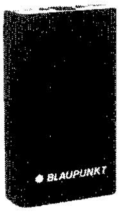
(D) Btx ✶ 30 39 68 #

MC / VKD 1 D91 420 007

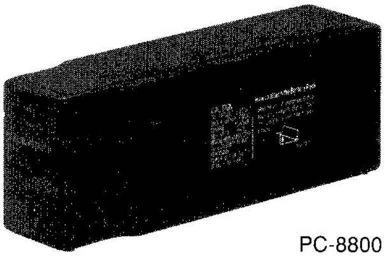
Hi 8



CR-8800 H



AX-8000



PC-8800

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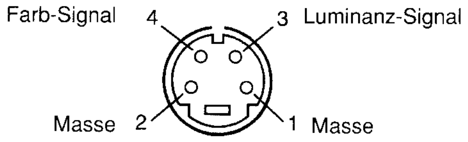
Technische Daten

Typ:	CR-8800 H
Betriebsspannung:	7,2 V Gleichspannung
Leistungsaufnahme:	Aufnahme-Betrieb: 7,2 V / 10,2 W (Batteriebetrieb)
Video-Aufnahmesystem:	Schrägspuraufzg. Hi8 und 8mm
Bandgeschwindigkeit:	20,05 mm/sec.
Bandformat:	Video 8 (Hi8)-Cassetten
Aufnahme/Wiedergabe-Zeit:	90 min. mit Cass. 5-90
Vorspul/Rückspul-Zeit:	Weniger als 4,5 min. mit Cass. 5-90
Köpfe:	Video/Audio: 2(3) rotierende Köpfe FM-Tonspur (Mono), PCM-Tonspuren (Stereo) Löschen: 1 rotierender Löschkopf
VIDEO	
Fernsehsystem:	CCIR: 625 Zeilen, 50 Halbbilder PAL-Farbsignal
Ausgangspegel:	VIDEO OUT-Buchse: 1,0 V_{ss}, 75 Ω asymmetrisch S-VIDEO OUT-Buchse: Y = 1,0 V_{ss}, C = 0,5 V_{ss}, 75 Ω asymmetrisch
AUDIO	
Eingangspegel:	MIC IN-Buchse: -70 dB, 4,7 kΩ asymmetrisch
Ausgangspegel:	AUDIO OUT-Buchsen: -8 dB, 600 Ω asymmetrisch
Tonspuren:	1 FM-Spur (Mono) 2 PCM-Spuren (Stereo)
Bildwandler:	1/2-Zoll CCD / 450 000 Bildpunkte (Charge Coupled Device)
Objektiv:	8fach Motor-Zoom, automatische Blendeneinstellung, Autofokus-System F1:1,2 (8,5-68mm) incl. Makroeinstellung, Objektiv-Durchmesser (vorne) 49 mm
Sucher:	2/3-Zoll elektronischer Sucher
Weißabgleich:	Vollautomatisch/Festwerte für Tageslicht (5500 K) und Kunstlicht (3200 K)
Standardbeleuchtung:	1400 lux
Mindestbeleuchtung:	9 lux
Horizontale Videoauflösung:	Hi8: besser als 380 Linien (S-VIDEO-Ausgang) 8mm: besser als 260 Linien
Signal/Störabstand:	Video: besser als 44 dB PCM-Audio: besser als 45 dB FM-Audio: besser als 45 dB
Tonfrequenzgang:	PCM-Spuren: 50 Hz bis 15 kHz FM-Spur: 40 Hz bis 12 kHz
Betriebstemperatur:	0°C - 40°C
Luftfeuchtigkeit:	20% - 80%
Gewicht:	ca.1,7 kg (mit Akku und Cassette)
Abmessungen:	128 (B) x 141 (H) x 350 (T) mm

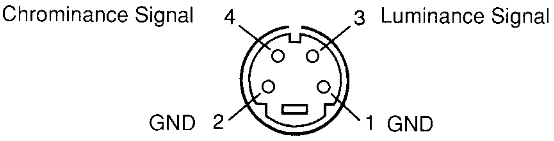
Belegung der S-VIDEO OUT-Buchse:



Specifications

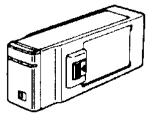
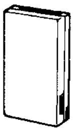
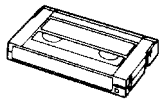
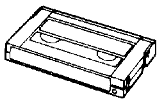
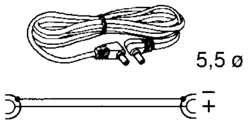
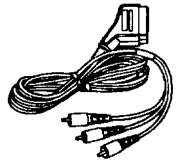
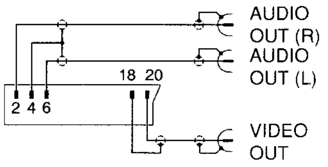
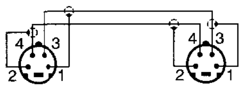
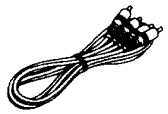
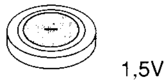
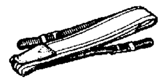
Type:	CR-8800 H
Power Source:	DC 7.2 V
Power Consumption:	Recording mode: 7.2 V / 10.2 W (Battery operation)
Video Recording System:	Recording by Hi8 and 8mm
Tape Speed:	20.05 mm/s
Tape Format:	Video 8 (Hi8) tapes
Recording/Playback Time:	90 min. with Cass. 5-90
FF/REW Time:	Less than 4.5 min. with Cass. 5-90
Heads:	Video/Audio: 2(3) rotary heads FM audio track (mono), PCM audio tracks (stereo) Erase: 1 rotary erase head
VIDEO	
Television System:	CCIR: 625 lines, 50 fields PAL colour signal
Output level:	VIDEO OUT: 1.0 V_{p-p}, 75 Ω unbalanced S-VIDEO OUT: Y = 1.0 V_{p-p}, C = 0.5 V_{p-p}, 75 Ω unbalanced
AUDIO	
Input level:	MIC IN: -70 dB, 4.7 kΩ unbalanced
Output level:	AUDIO OUT: -8 dB, 600 Ω unbalanced
Audio Tracks:	1 FM track (mono) 2 PCM tracks (stereo)
Image Sensor:	1/2-inch CCD / 450 000 pixel (Charge Coupled Device)
Lens:	8:1 power zoom lens, auto iris, auto focus system F1:1.2 (8.5-68mm) incl. macro function, lens front diameter 49 mm
Viewfinder:	2/3-inch electronic viewfinder
White Balance:	Full auto/fixed position outdoor (5500 K) and indoor (3200 K)
Standard Illumination:	1400 lux
Minimum Required Illumination:	9 lux
Video Horizontal Resolution:	Hi8: more than 380 lines (S-VIDEO-output) 8mm: more than 260 lines
Signal-to-Noise-Ratio:	Video: more than 44 dB PCM Audio: more than 45 dB FM Audio: more than 45 dB
Audio Frequency Response:	PCM tracks: 50 Hz to 15 kHz FM track: 40 Hz to 12 kHz
Operating Temperature:	0°C - 40°C
Operating Humidity:	20% - 80%
Weight:	approx. 1.7 kg (with accu and cassette)
Dimensions:	128 (W) x 141 (H) x 350 (D) mm

S-VIDEO OUT Socket Connections:



Mitgeliefertes Zubehör:

Standard Accessories:

1 Stück Netzadapter 1 pc. Power adaptor 	1 Stück Akku 1 pc. Battery pack 	1 Stück Hi8-Cass. E5-60 HiME 1 pc. Hi8 Cassette E5-60 HiME 	1 Stück Hi8-Reinigungscassette 1 pc. Hi8 Cleaning tape CL-5 
1 Stück Stromversorgungskabel 1 pc. Power supply cable 	1 Stück AV-Ausgangskabel 1 pc. AV Output cable   AUDIO OUT (R) AUDIO OUT (L) 18 20 2 4 6 VIDEO OUT		
1 Stück S-Videokabel 1 pc. S-Video cable 	1 Stück Audiokabel (Cinch) 1 pc. Audio cable (Cinch) 	1 Stück LR 1130 Batterie 1 pc. LR 1130 Battery 	1 Stück Trageriemen 1 pc. Shoulder belt 

Transporthinweis:

Wird die CR-8800 H längere Zeit nicht benutzt (bzw. gelagert oder transportiert) ist der Akku abzunehmen, da auch im abgeschaltetem Zustand ein kleiner Strom fließt.

Einstellung der Bildsynchronisation bei „Standbild“ und „Zeitlupe“

1. Eine Aufnahme durchführen (ca. 5 Min.).
2. Die gemachte Aufnahme wiedergeben.
3. Die Taste „PAUSE/STILL“ drücken.
4. Mit dem Regler „V-LOCK“ (V) an der Seite des Gerätes das Bildzittern auf Minimum einstellen.
5. Das Gerät wieder auf Wiedergabe und anschließend auf Zeitlupe „SLOW“ schalten.
6. Mit dem Regler „SLOW TRACKING“ (S) an der Seite des Gerätes das Bildzittern auf Minimum einstellen.

Transport Advice

If the CR-8800 H will not be used for some time (or stored or transported resp.) the battery pack must be taken off, as there is always a small current flowing.

Adjustment of Picture Synchronization for “Still-Frame Picture” and “Slow-motion”

1. Record a programme (ca. 5 min.).
2. Playback the recorded programme.
3. Press the “PAUSE/STILL” button.
4. Tune the jumping pictures to a minimum by means of the “V-LOCK” (V) adjuster situated at the side of the set.
5. Switch the set back to playback and afterwards switch to slow-motion “SLOW”.
6. Time the jumping pictures to a minimum by means of the “SLOW TRACKING” (S) adjuster at the side of the set.

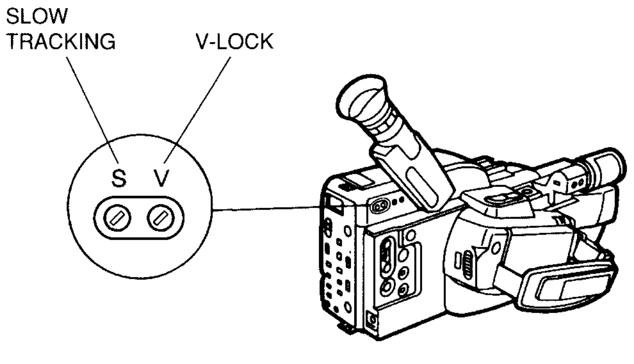


Fig. A

Mechanische Wartung

Nachstehende Teile benötigen eine regelmäßige Reinigung, da sich mit der Zeit Bandabrieb ansammelt.

Bei Verwendung von Marken-Videocassetten sind die Reinigungsarbeiten nach ca. 500 Betriebsstunden durchzuführen. Bei Verwendung anderer Videocassetten können die Reinigungsarbeiten schon nach kürzerer Betriebszeit notwendig werden.

Reinigung der Rotationsköpfe

- Demontage der Gehäuseteile siehe „Servicevorbereitungen" Seite 1 - 5.
- Ein weiches Ledertuch (Kopfreiniger 8 619 497 813) oder ein fusselfreies Tuch mit reinem Alkohol anfeuchten und mit sanftem Druck auf die Rotationsköpfe (A) halten. Nun die Kopfscheibe mit der Hand hin- und herbewegen. Diesen Vorgang wiederholen bis der Bandabrieb beseitigt ist.

Mechanical Servicing

The following parts require regular cleaning because of gradual tape abrasion. If you use brand video cassettes, cleaning has to be performed approximately after 500 working hours. If you use other video cassettes, cleaning already becomes necessary after a shorter working time.

Cleaning of rotary heads

- Disassembly of the cabinet parts, see page 1 - 5 "Service Preparations".
- Moisten a soft leather cloth (head cleaner 8 619 497 813) or a lintfree cloth with pure alcohol and press it softly on the rotary heads (A). Move the upper cylinder by hand in either direction and repeat this procedure until the tape abrasion has been removed.

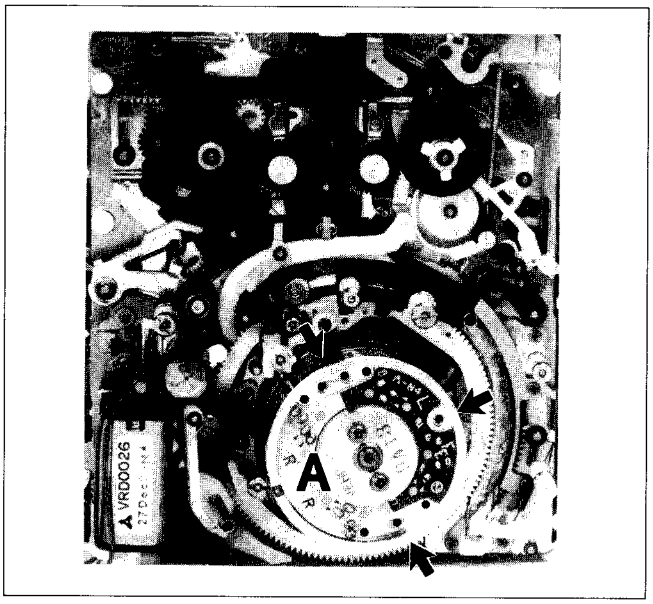


Fig. A

- **Reinigung der Führungsrollen, der Andruckrolle, der Capstanwelle und der Bandführungen.**

  Diese Teile (B) sind mit einem Wattestäbchen, das mit reinem Alkohol angefeuchtet ist, zu reinigen.

- **Cleaning of the guide rollers, the pressure roller, the capstan shaft and the tape sliders.**

  These parts (B) have to be cleaned with a cotton-wool bud moistened with pure alcohol.

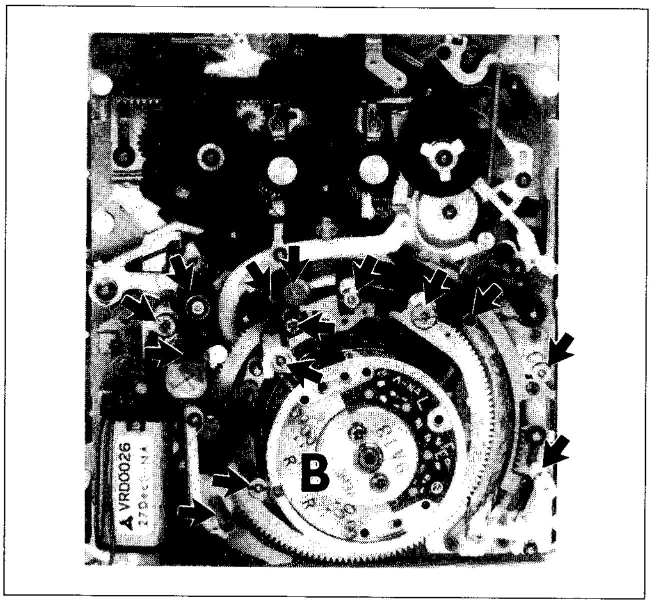


Fig. B

- Nach Beendigung der Reinigungsarbeiten die demontierten Teile wieder montieren.

Hinweise:

1. Bevor die Videocassette eingesetzt wird, müssen alle gereinigten Teile gut abgetrocknet sein, um Bandschäden zu vermeiden.
2. Antriebsriemen und Lager benötigen unter normalen Betriebsbedingungen keine Wartung.

- After finishing these cleaning works reassemble all disassembled parts.

Hints:

1. Before the video cassette can be inserted all cleaned parts have to be completely dry in order to avoid tape defects.
2. Drive belts and bearing do not require servicing in normal working conditions.

1. Servicevorbereitungen

Flußdiagramm zur Demontage

Dieses Flußdiagramm zeigt die Reihenfolge, in der Gehäuseteile und Leiterplatinen demontiert werden müssen, um diejenigen Teile zu erreichen, bei denen Service notwendig ist.
Beim Zusammenbau die Schritte in umgekehrter Reihenfolge durchführen.

Hinweis:
Das Gerät ist sehr kompakt gebaut und hat teilweise Verriegelungsklemmen anstelle von Befestigungsschrauben. Arbeiten Sie daher beim Service äußerst vorsichtig, damit diese Verriegelungsklemmen nicht abbrechen.

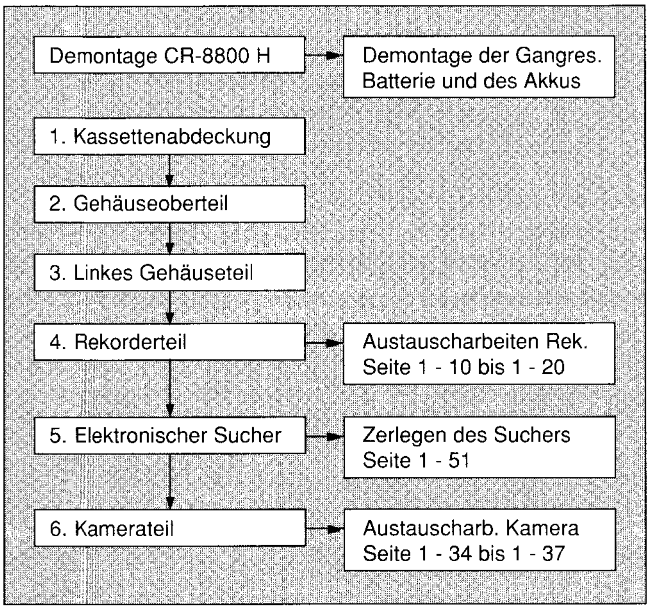

Demontage CR-8800 H
Demontage der Gangres. Batterie und des Akkus
1. Kassettenabdeckung
2. Gehäuseoberteil
3. Linkes Gehäuseteil
4. Rekorderteil
Austauscharbeiten Rek. Seite 1 - 10 bis 1 - 20
5. Elektronischer Sucher
Zerlegen des Suchers Seite 1 - 51
6. Kamerateil
Austauscharb. Kamera Seite 1 - 34 bis 1 - 37

Fig. 1 Flußdiagramm zur Demontage

Demontage

Hinweise:
- Beim Zusammenbau sicherstellen, daß alle elektrischen Verbindungen hergestellt und keine Bauteile beschädigt sind.
- Während der Arbeiten dem Gerät keine Spannung zuführen.

Demontage von Gangreservebatterie und Akku

1. Nach dem Ausschalten des Camerarecorders ca. 10 Sekunden warten, bevor der Akku abgenommen wird.
   Um den Akku abzunehmen, den Akku-Verriegelungshebel nach unten drücken und dabei nach vorn schieben. Den Akku abnehmen (Fig. 2).
2. Den Deckel an der Unterseite mit einem Kreuzschlitz-Schraubendreher öffnen und die Gangreservebatterie entfernen (Fig. 3).

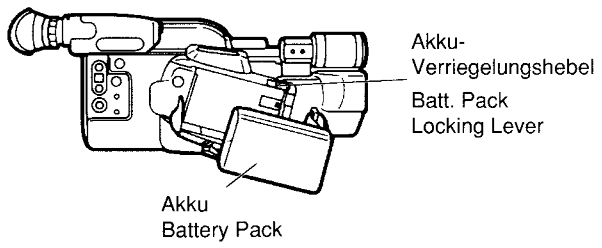

Akku-Verriegelungshebel
Batt. Pack Locking Lever
Akku
Battery Pack

Fig. 2

1. Service Preparations

Disassembly Flowchart

This flowchart indicates disassembly steps of the cabinet parts and the P.C. Boards in order to find the items necessary for servicing.
When reassembling, perform the steps in the reverse order.

Note:
This unit is very compact and has partly been fitted with locking portions instead of fixing screws. When removing the cabinet, work with care so as not to break the locking portions.

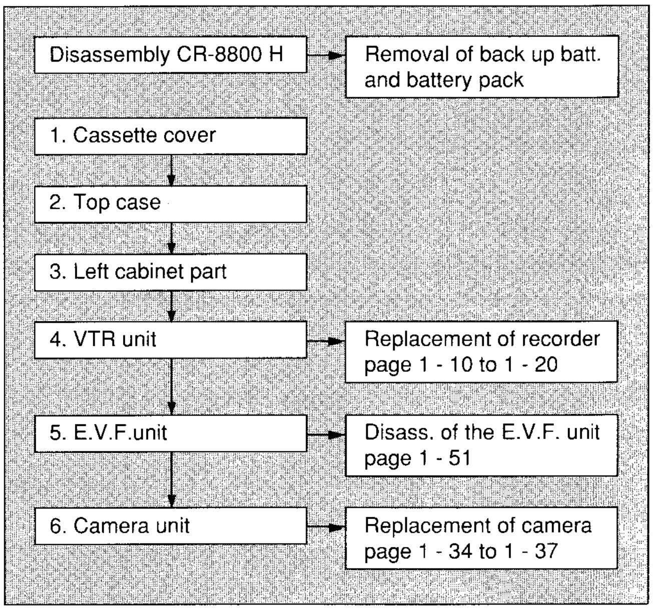

Disassembly CR-8800 H
Removal of back up batt. and battery pack
1. Cassette cover
2. Top case
3. Left cabinet part
4. VTR unit
Replacement of recorder page 1 - 10 to 1 - 20
5. E.V.F.unit
Disass. of the E.V.F. unit page 1 - 51
6. Camera unit
Replacement of camera page 1 - 34 to 1 - 37

Fig. 1 Disassembly Flowchart

Disassembly

Notes:
- When reinstalling, ensure that the connectors are connected and that no electrical components are damaged.
- Do not supply power to the deck during working.

Removal of Back up Battery and Battery Pack

1. Wait about 10 seconds after turning the camcorder off, before removing the battery pack.
   To remove the battery pack, push the battery pack locking lever down and forward. Remove the battery pack (Fig. 2).
2. Remove the lid on the bottom of the camcorder with a philips screwdriver and remove the back up battery (Fig. 3).

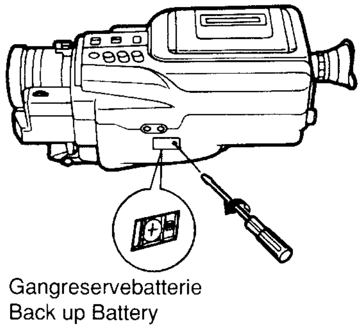

Gangreservebatterie
Back up Battery

Fig. 3

Demontage der Gehäuseteile

Hinweis:

- Um eine Beschädigung der Teile während der Instandsetzung zu vermeiden, ein Tuch oder ein anderes weiches Material unter die Leiterplatinen oder das Gerät legen.

Disassembly of Case

Note:

- Place the cloth or any other soft material under the P.C. Boards or unit for preventing them from being damaged while servicing.

Teil **Part**	**Fig.** **Fig.**	**Entfernen, entriegeln, abziehen** **Remove, unlock, disconnect**	**Bemerkung** **Remark**
Kassettenabdeckung Cassette cover	4 4	2 Schrauben (A) 2 Screws (A)	
Gehäuseoberteil Top case	5 5	1 Schraube (B), 3 Schrauben (C), 4 Schrauben (D) 1 Screw (B), 3 Screws (C), 4 Screws (D)	Die Feder des Zubehörschuhs entfernen Remove the accessorie shoe spring
Gehäuseteil, links Side case, left	6 6	1 Schraube (E), 6 Schrauben (F), 4 Schrauben (G) 1 Screw (E), 6 Screws (F), 4 Screws (G)	
Rekorderteil VTR unit	7 7	4 Schrauben (H) 4 Screws (H)	Steckerverbindungen lösen Disconnect the connectors
Elektronischer Sucher E.V.F. unit	8 8	2 Schrauben (I) 2 Screws (I)	Stecker und Masseleitung lösen Remove the connectors and the ground lead
Kamerateil Camera unit	9 9	1 Schraube (J), 2 Schrauben (K) 1 Screw (J), 2 Screws (K)	Steckerverbindungen lösen Disconnect the connectors

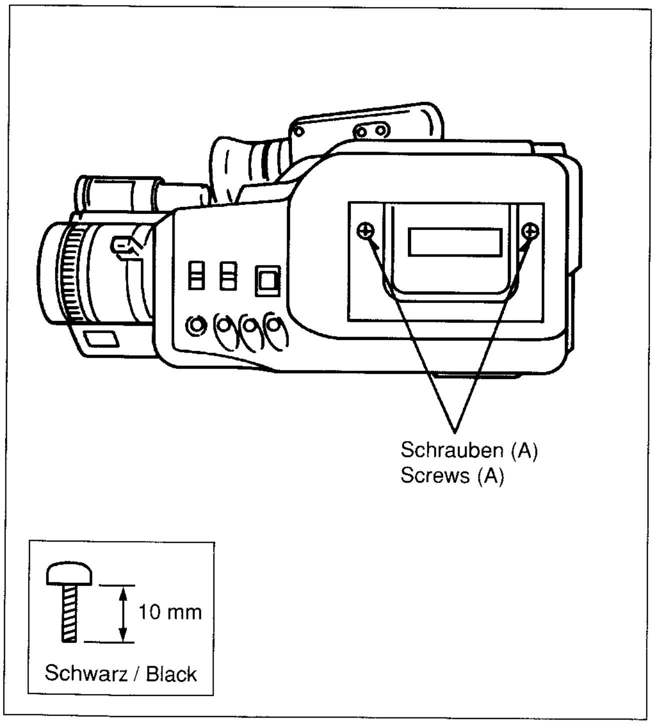

Schrauben (A)
Screws (A)
10 mm
Schwarz / Black

Fig. 4

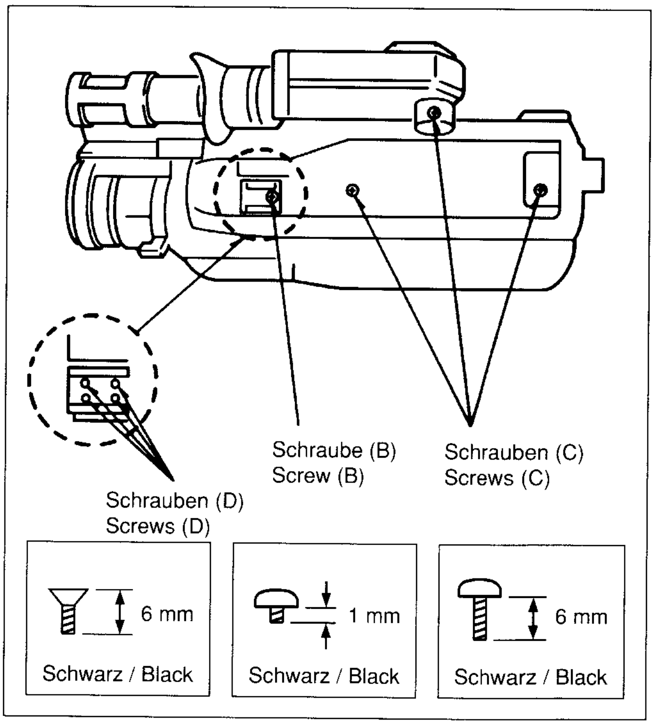

Schraube (B)
Screw (B)
Schrauben (C)
Screws (C)
Schrauben (D)
Screws (D)
6 mm
Schwarz / Black
1 mm
Schwarz / Black
6 mm
Schwarz / Black

Fig. 5

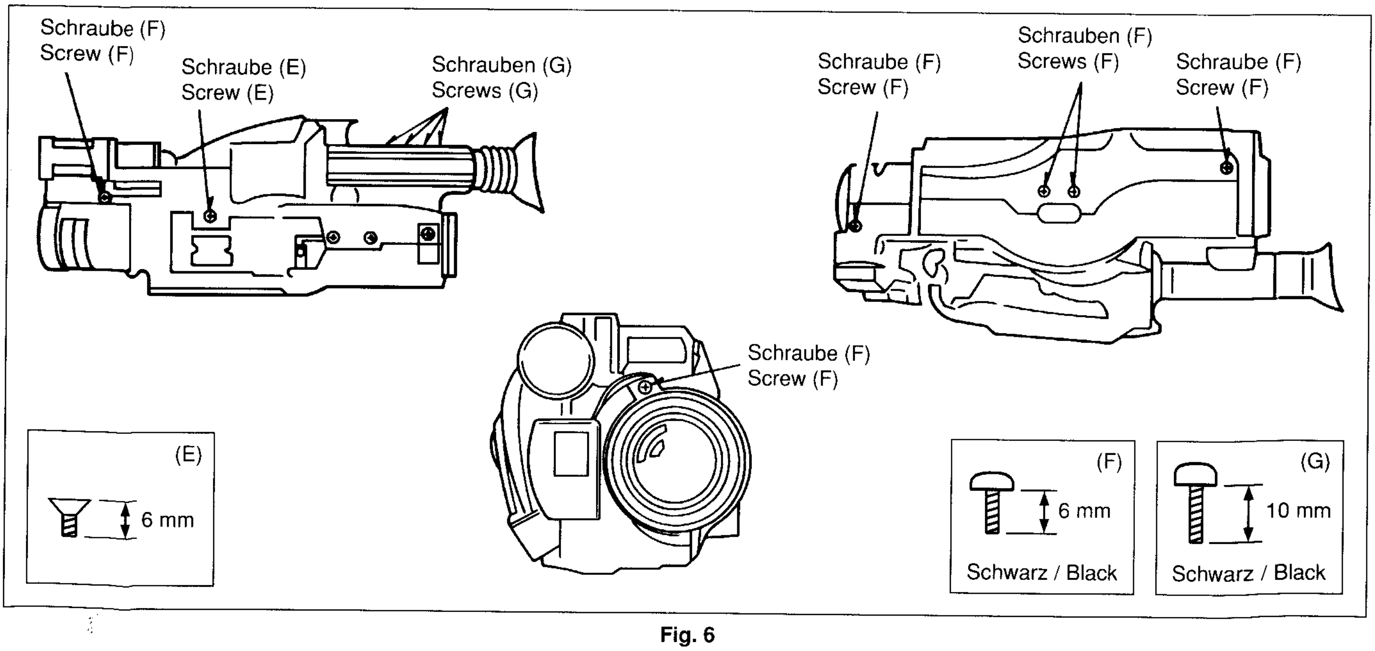

Schraube (F)
Screw (F)
Schraube (E)
Screw (E)
Schrauben (G)
Screws (G)
Schraube (F)
Screw (F)
Schrauben (F)
Screws (F)
Schraube (F)
Screw (F)
Schraube (F)
Screw (F)
(E)
6 mm
(F)
6 mm
Schwarz / Black
(G)
10 mm
Schwarz / Black

Fig. 6

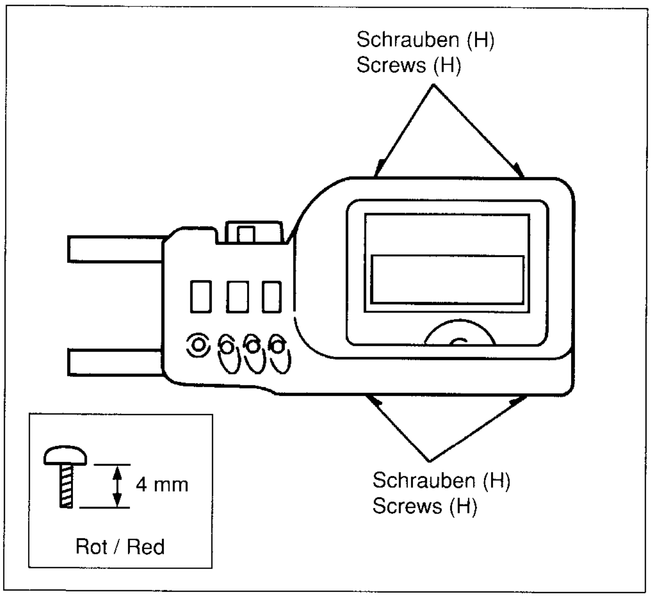

Schrauben (H)
Screws (H)
4 mm
Rot / Red
Schrauben (H)
Screws (H)

Fig. 7

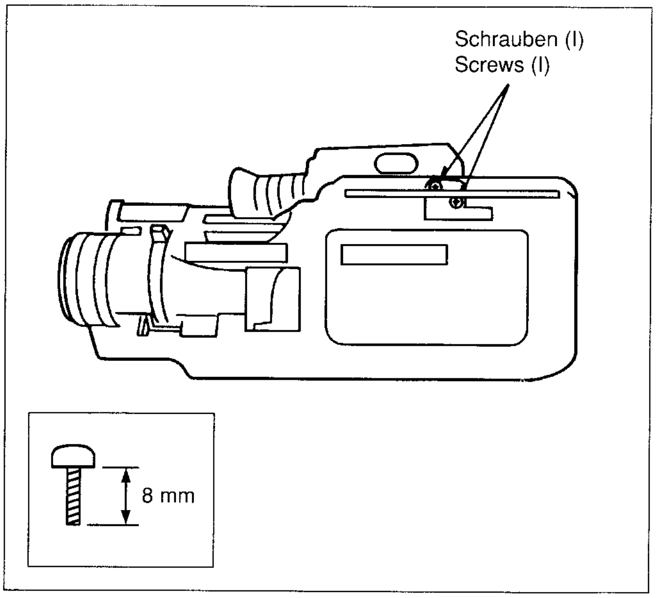

Schrauben (I)
Screws (I)
8 mm

Fig. 8

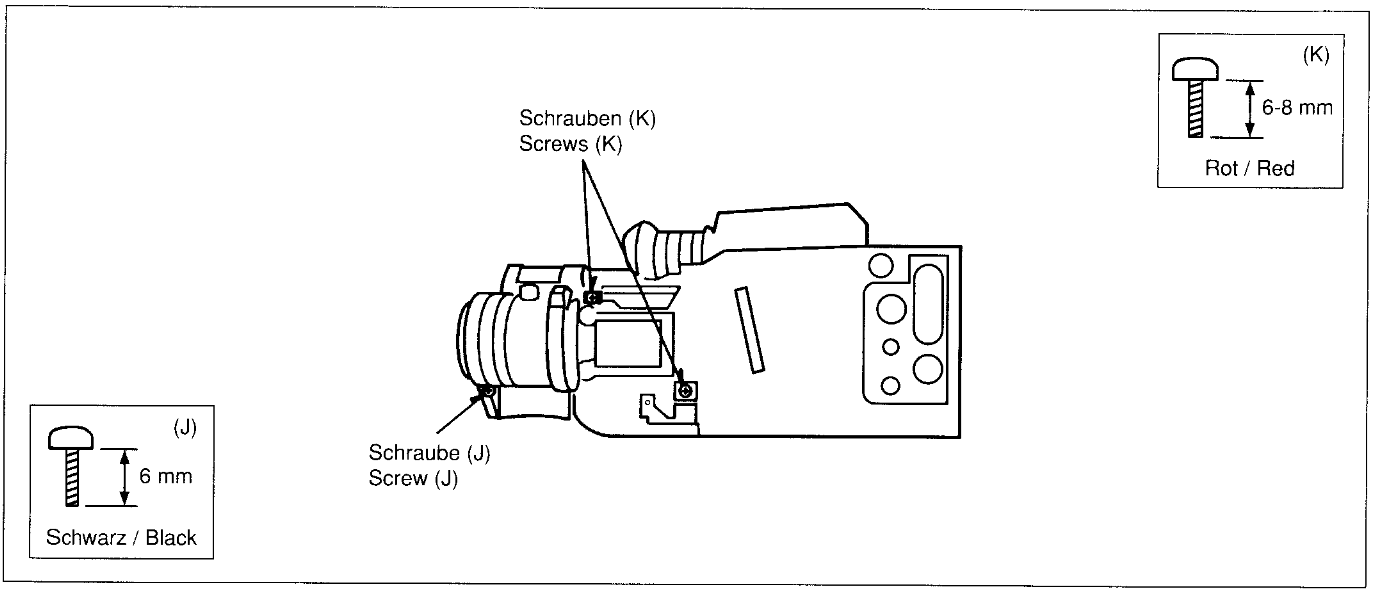

(K)
6-8 mm
Rot / Red
Schrauben (K)
Screws (K)
(J)
6 mm
Schwarz / Black
Schraube (J)
Screw (J)

Fig. 9

Wechseln der Folienkabel

Entfernen:

1. Zuerst die Klemmfassung entriegeln. Dazu beide Seiten des Einsatzes hochziehen (Fig. 10). Nun kann das Folienkabel aus der Klemmfassung gezogen werden.

Replacement of the Flexible Cable

Removal:

1. On the trap connector, pull out on both ends of the locking tab surrounding the cable end to release the trap on the connector. Then pull flexible cable out to remove as shown in Fig. 10.

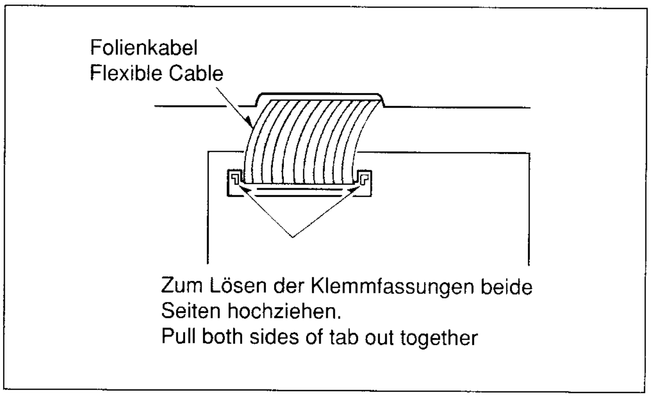

Folienkabel
Flexible Cable
Zum Lösen der Klemmfassungen beide Seiten hochziehen.
Pull both sides of tab out together

Fig. 10

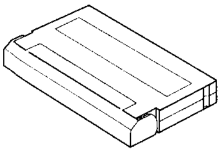
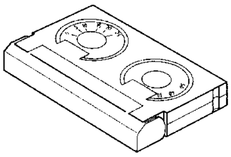
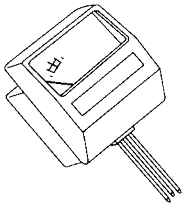
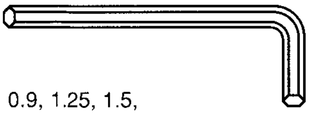
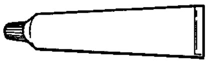
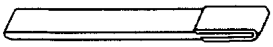
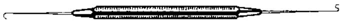
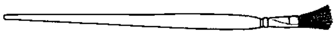
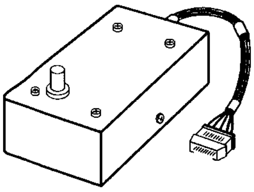
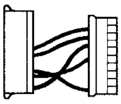
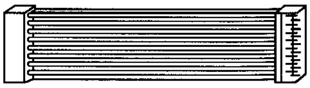
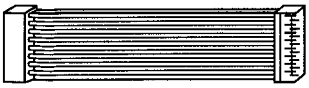
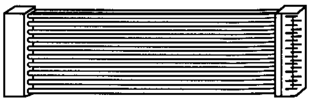
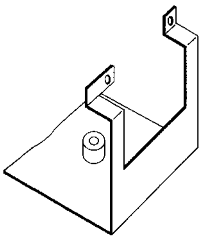
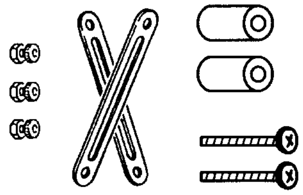
Einbau:

2. Das Folienkabel in die Klemmfassung stecken ohne es zu verkanten.
3. Nun das Folienkabel in der Mitte anfassen und bis zum Anschlag in die Fassung drücken und festhalten.
4. Den Einsatz der Klemmfassung herunterdrücken, bis beide Seiten einrasten.

Installation:

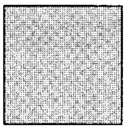
2. Insert the end of the flexible cable into the trap connector so it lays smoothly across the slot.
3. Press the middle of the cable firmly the trap connector slot, and hold it securely.
4. Without pinching the cable, press the locking tabs in against the trap connector until both ends snap into their locked positions.

Erforderliche Meßgeräte, Schablonen und Spezialwerkzeuge
Required Servicing Fixtures, Jigs and Special Tools

8 627 105 128 Video 8 -Testkassette Video 8 Alignment tape 	8 627 105 113 Video 8 -Drehmomentca. Video 8 Cassette torque meter  (VFK 0388)	8 627 105 127 Bandzugwaage Back tension meter Video 8 
8 619 497 811 Sechskantschlüsselsatz Hexagonal wrench set  (0.7, 0.9, 1.25, 1.5, 1.6, 2, 2.4, 3 mm) (8 619 105 151 / VFK 0326)	8 619 590 814 Einsteller für Bandführung Post hight adjustment driver (8 627 105 114 / VFK 0389)	8 619 497 814 Schmiermittel Lubricant  (8 627 000 315 / 8 627 000 722 / MOR 265)
8 619 497 813 Kopfreiniger (3 Stück) Head cleaning sticks (3 pc.)  (8 627 000 552 / VFK 27)	8 627 000 360 Federhaken Spring hook 	8 627 000 365 Pinsel Brush 
8 619 590 724 Anschlußbox Y/C Separator  (8 627 105 039 / VFK 0304)	8 619 520 621 Anschlußkabel Connection cable Anschlußbox / YC Separator  (VFK 0640)	8 619 590 741 Verlängerungskabel Extension cable B 201 / B 301 (22p.)  (VFK 0609)
8 619 590 742 Verlängerungskabel Extension cable B 305 / B 701 (18p.)  (VFK 0494)	8 619 590 776 Verlängerungskabel Extension cable P 3503 / Anschlußbox Y/C Separator FP 307 / P 3503 (12/13p.) (VWJ 0442)	8 619 590 787 Verlängerungskabel Extension cable P 3001 / P 3502 (26p.)  (VFK 0682)
8 619 497 800 Kamerahalter Camera holder  (8 627 105 116 / VFK 0382)	8 627 105 219 Kamera-Befestigungssatz Camera mounting kit  (VFK 0431 + VFK 0432 + XSN 26/18)	8 619 590 812 Abgleichstift (schmal) Adjustment driver (small) 8 619 590 813 Abgleichstift (breit) Adjustment driver (large) 8 619 590 812 = 8 627 105 115 8 619 590 813 = 8 627 105 126

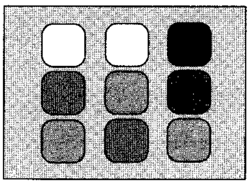
Erforderliche Meßgeräte, Schablonen und Spezialwerkzeuge (Fortsetzung)
Required Servicing Fixtures, Jigs and Special Tools (Continued)

Filter für den Kameraabgleich
Filter for Camera Adjustment

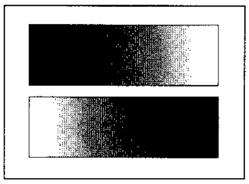


C 12 (80B) Filter	8 619 437 001	VFK 0374
C 8 Filter	8 619 510 704	VFK 0547

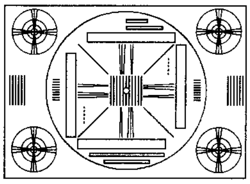
Handelsüblich — Farbtestbild
Usual in trade — Color Chart



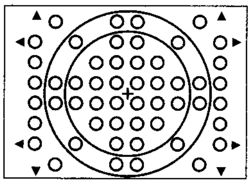
Handelsüblich — Testbild log. Grauskala
Usual in trade — Gray Scale Chart



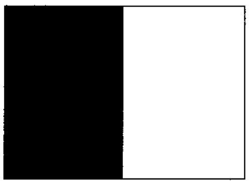
Im Anhang — Testbild-Auflösung
In the enclosure — Resolution Chart



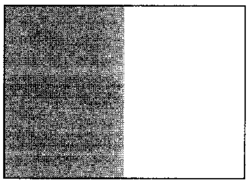
Im Anhang — Testbild-Kreis
In the enclosure — Ball Chart



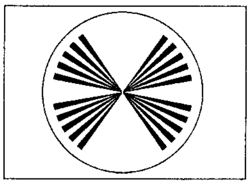
Im Anhang — Schwarz/Weiß-Testbild
In the enclosure — Black/White Chart



Im Anhang — Grau/Weiß-Testbild
In the enclosure — Gray/White Chart



Im Anhang — Auflagemaß-Testbild
In the enclosure — Hunting Chart



Anwendung der Verlängerungskabel

Um den kompletten Service rationell durchführen zu können, müssen evtl. die Platinen demontiert werden.
Die einzelnen Platinen werden dann über Verlängerungskabel miteinander verbunden (Fig. 1 und 2).

Verlängerungskabel für den Kamerateil

Using the Extension Cables

In order to perform the complete service efficiently, the C.B.A.'s have to be disassembled.
The separate C.B.A.'s are then interconnected by means of the extension cables (Fig. 1 and 2).

Extension Cables for the Camera Unit

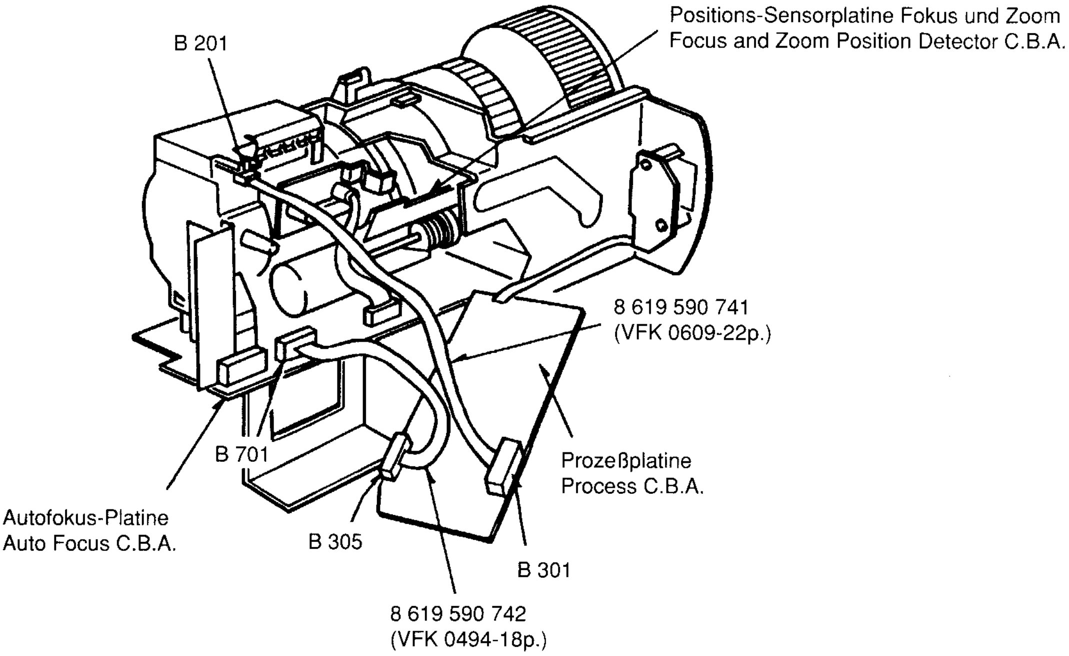

Positions-Sensorplatine Fokus und Zoom
Focus and Zoom Position Detector C.B.A.
B 201
8 619 590 741
(VFK 0609-22p.)
B 701
Prozeßplatine
Process C.B.A.
Autofokus-Platine
Auto Focus C.B.A.
B 305
B 301
8 619 590 742
(VFK 0494-18p.)

Fig. 1

7. Zum Ausbauen des Capstanmotors die 3 Schrauben (Fig. 9) entfernen.
   Auf der Unterseite ist eine Abdeckung zu entfernen.

7. Remove the 3 screws and remove the capstan motor (Fig. 9).
   A cover has to be removed at the bottom.

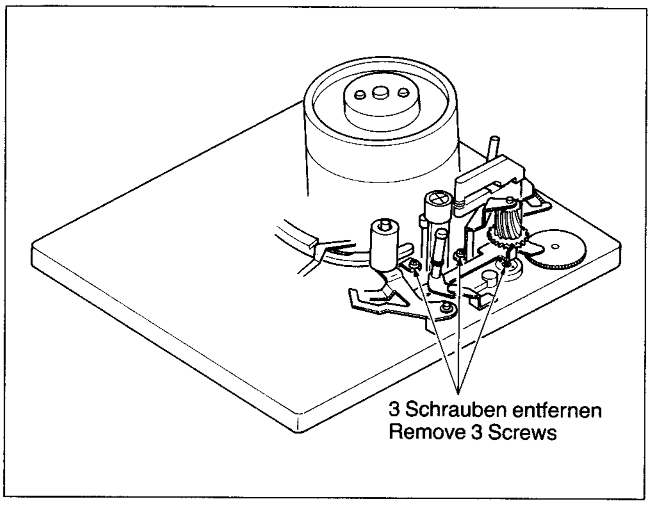


Fig. 9

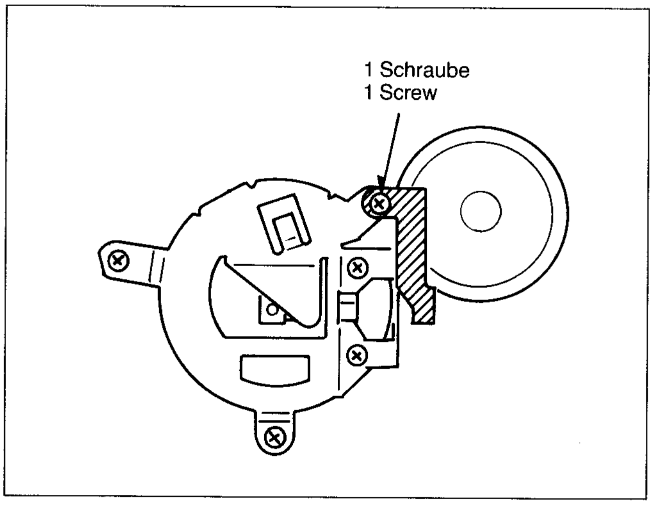


Fig. 10

8. Den Capstanmotor in umgekehrter Reihenfolge der Demontagebeschreibung montieren und kontrollieren, ob das Zahnrad (A) korrekt (leichtgängig) montiert ist.

8. Install the capstan motor and the assemble the motor subject to the reverse steps of disassemble procedure. When installing the capstan motor, confirm that the gear (A) portion is set properly.

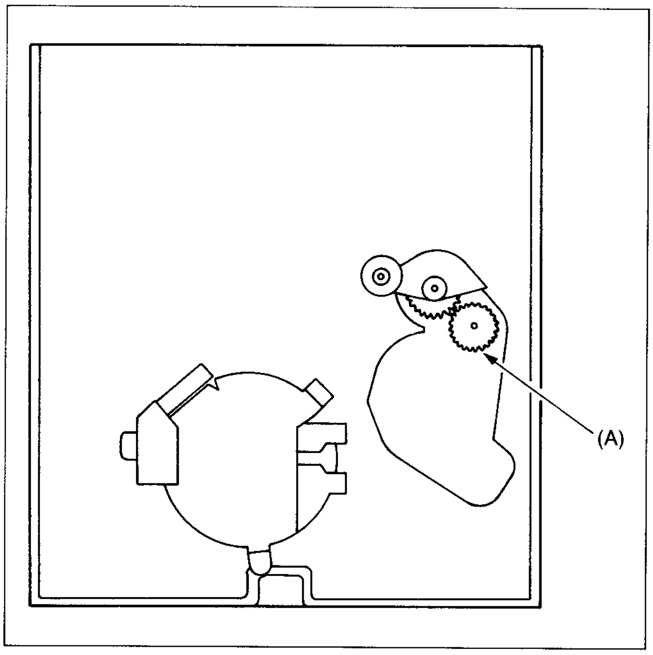


Fig. 11

2.5 Austausch des Bremsbandes

1. Den Befestigungsring des Abwickeltellers entfernen und den Abwickelteller abnehmen.

2.5 Tension Band Replacement Method

1. Remove the top ring of supply reel table, then remove the supply reel table.

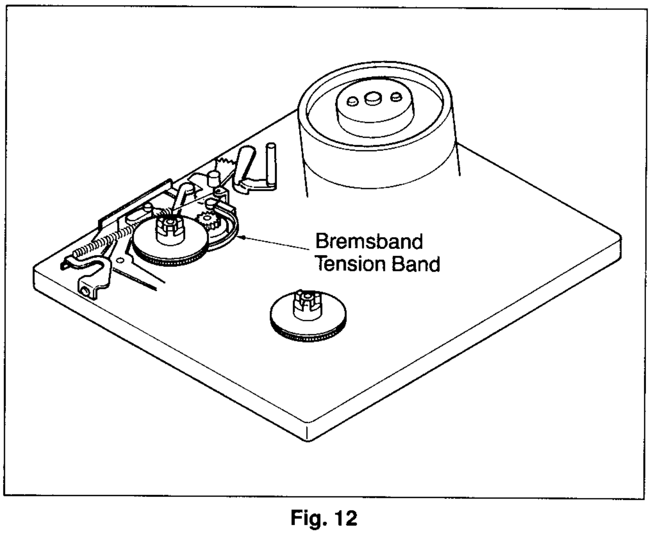


Fig. 12

2. Die Feder (Fig. 13) entfernen.
3. Zum Abnehmen der Bremsband-Einheit den Befestigungsring entfernen.

2. Remove the spring (Fig. 13).
3. Remove the top ring of the tension band unit and remove the tension band unit.

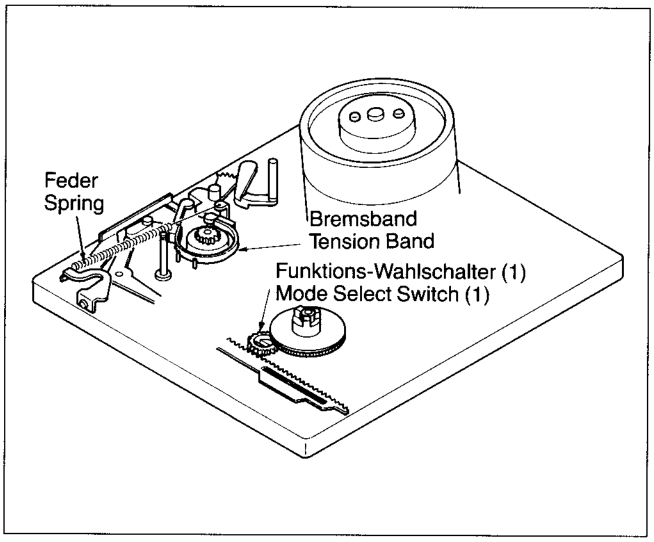

Feder
Spring
Bremsband
Tension Band
Funktions-Wahlschalter (1)
Mode Select Switch (1)

Fig. 13

4. Die Bremsband-Einheit in umgekehrter Reihenfolge der Demontagebeschreibung montieren.
5. Den Bandzug neu einstellen (Seite 1-20).

4. Install the new tension band unit and assemble the unit subject to the reverse steps of disassemble procedures.
5. Adjust Back Tension as described on page 1-20.

2.6 Austausch der Funktions-Wahlschalter

1. Die Mechanik in die Position „Eject“ bringen.
2. Die beiden Schrauben am Funktions-Wahlschalter (1) entfernen.
3. Die 3 Lötstellen entlöten und den Funktions-Wahlschalter (1) abnehmen.

2.6 Mode Select Switches Replacement Method

1. Set the unit into Eject position.
2. Remove 2 screws of the mode select switch (1).
3. Unsolder the 3 points of the mode select switch (1) and remove the mode select switch (1).

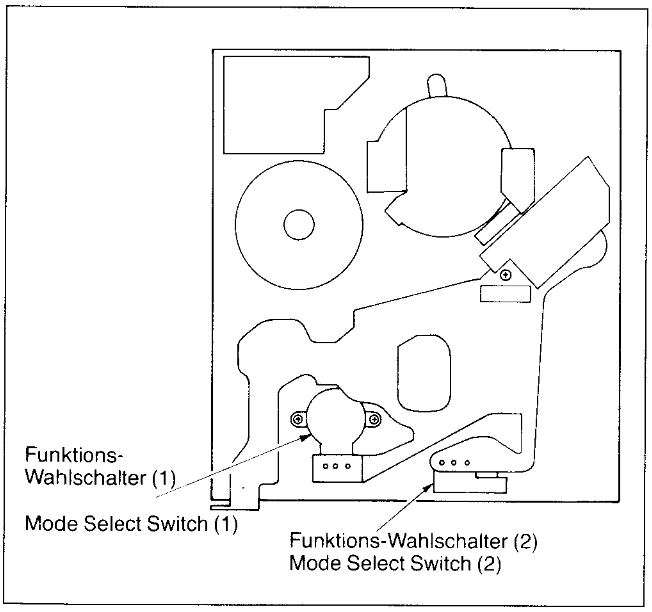

Funktions-Wahlschalter (1)
Mode Select Switch (1)
Funktions-Wahlschalter (2)
Mode Select Switch (2)

Fig. 14

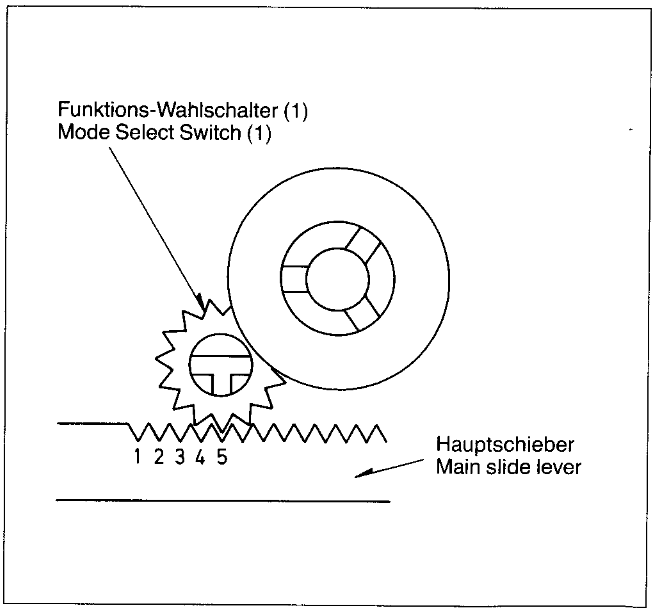

Funktions-Wahlschalter (1)
Mode Select Switch (1)
1 2 3 4 5
Hauptschieber
Main slide lever

Fig. 15

4. Den neuen Funktionswahlschalter (1) so montieren, daß der kurze Teil der „T“-Markierung auf die Kerbe des Hauptschiebers zeigt (Fig. 15).
5. Zum Austausch des Funktions-Wahlschalters (2) die drei Lötstellen entlöten und die Befestigungsschraube entfernen.
   Bei der Montage darauf achten, daß der Schaltzapfen in den Schlitz des Schiebers greift.

4. Install the new mode select switch (1) so that the top of the“T” mark of the mode select switch (1) is set at 5th sawtooth of the main slide lever.
5. In order to exchange the mode select switch (2), unsolder three soldering points and remove the fixing screw
   During installation make sure that the notch grasps into the slit of the slide lever.

Hinweise zu den Hüllkurven (a) - (d) in Fig. 12

(a): Normal
Die Bandführungen S 6 und T 1 sind korrekt eingestellt.

(b): Der Bandlauf ist nicht korrekt.
Die Bandführung S 6 einstellen, damit der Bandeinlauf geradlinig wird.

(c): Der Bandauslauf ist nicht korrekt.
Die Bandführung T 1 einstellen, damit der Bandauslauf geradlinig wird.

(d): Die Hüllkurve ist spitz zulaufend.
Die Bandführungen S 6 und T 1 abwechselnd einstellen, bis die Hüllkurve die normale Form annimmt. Dabei wie bei den Punkten (b) und (c) vorgehen.

- Läßt sich die Hüllkurve nicht in die normale Form bringen, die Abgleichpunkte 4.-7. ab Seite 1-17 wiederholen. Die Bandführungen S 7 und T 2 nicht verstellen.

12. Kontrollieren, daß an keiner Bandführung eine Verformung des Bandes auftritt.
13. Den Rekorder nun abwechseld von Play auf Review und umgekehrt schalten. Die obere Bandkante darf dabei an der Bandführung T 1 nicht umknicken. Eine Einstellung erfolgt mit der Bandführung T 3.
    Wird beim Umschalten von Play auf Review die obere Bandkante geknickt, die Bandführung T 3 nach rechts drehen. Wandert das Band nach unten, die Bandführung T 3 nach links drehen.
14. Den Kondensator vom IC 2007 Pin 4 entfernen.
15. Die Wiedergabequalität von Bild und Ton prüfen.
16. Nun die Aufnahme durchführen, diese wiedergeben und die Bild- und Tonqualität prüfen.

3.3 Bandzug-Einstellung

1. Bei der Wiedergabe die Bandzugwaage in den Bandlauf einfügen (Fig. 13) und ablesen. Der Sollwert beträgt 8 ± 1 Gramm.
2. Zum Einstellen die Schraube lösen und mit der Schraube (B) den Bandzug einstellen. Anschließend die Schraube (A) festziehen.

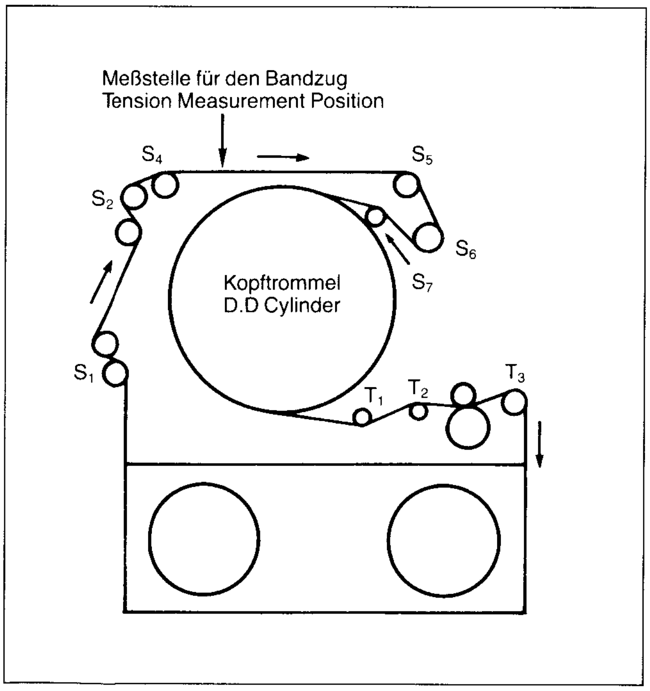


Fig. 13

Refer to the envelopes on the oscilloscope with above figures Fig. 12 (a) - (d).

(a): Normal
S 6 und T 1 posts are adjusted well.

(b): Entrence portion is bad.
Adjust S 6 post so that the entrance portion of the envelope is flat.

(c): Exit portion is bad.
Adjust T 1 post so that the exit portion of the envelope is flat.

(d): Envelope is crossed.
Adjust S 6 and T 1 alternately so that the cross of the envelope has disappeared. Adjust S 6 and T 1 posts by the method case (b) and case (c).

- If it is difficult to remove the cross of the envelope, adjust items 4.-7. again, S 7 and T 2 posts should not be touched in this adjustment.

12. Confirm that the tape is not distorted at any post.
13. Set the unit into playback mode and review mode alternately, adjust T 3 post so that the size of the curl at T 1 posts is stable in the playback mode and review mode.
    If the curl becomes bigger from playback mode to review mode, turn the T 3 post clockwise and if the curl becomes smaller from playback mode to review mode, turn the T 3 post counter clockwise.
14. Remove the capacitor from pin 4 of IC 2007 and ground.
15. Confirm that playback picture quality and audio sound quality are good.
16. Record a color bar signal and playback the just recorded portion. Confirm that playback picture quality and audio sound quality are good.

3.3 Back Tension Adjustment

1. In playback mode set the tension meter at portion (Fig. 13) and confirm the tension is 8 ± 1 gram.
2. If it is not, loosen the screws (A) and adjust the screws (B) so that the tension is in the specification. Then tighten the screw (A).

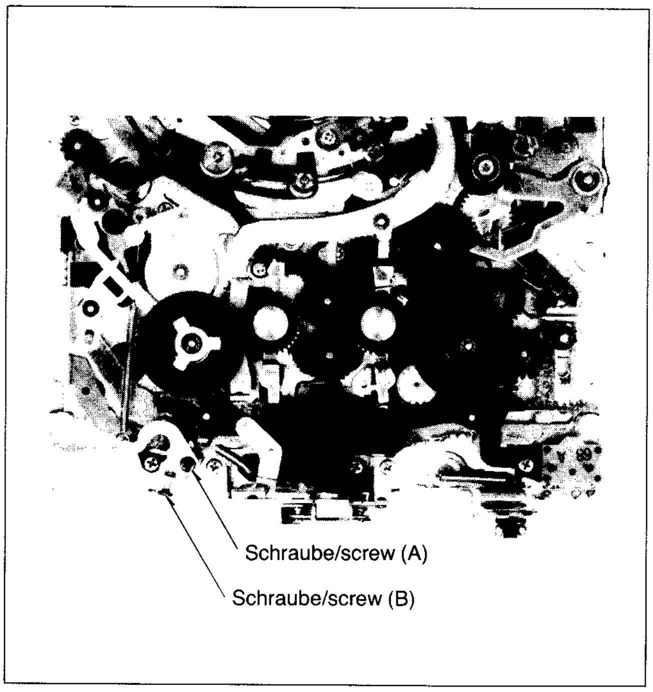


Fig. 14

4. Elektrischer Abgleich (Rekorderteil)

Meßgeräte und Werkzeuge

Für den Abgleich wird folgende Ausrüstung benötigt:

1. Digitalvoltmeter (D.V.M.)
2. Millivoltmeter
3. Zweistrahl-Oszilloskop
   Spannungsbereich 0,005-50 V/Teilung
   Frequenzbereich: Gleichspannung bis 20 MHz
   Tastkopf: 10:1 und 1:1
4. Frequenzzähler
   Frequenzbereich: 0-10 MHz
5. Sinusgenerator
6. Video-Wobbelgenerator
   Frequenzbereich: 0-10 MHz
7. Farb-TV-Monitor
8. Abgleichstift
9. Video 8 -Testkassette 8 627 105 128
10. Video 8 -Leerkassette, Hi8-Leerkassette

Triggerpunkte

Zur Triggerung des Oszilloskops werden folgende Meßpunkte benutzt:

Horizontal-Signale:	**Vertikal-Signale:**
Video-Ausgang	TP 2001 (Kopfumschaltimpuls) bzw. Video-Ausgang

Vorbereitungen

1. Die Gehäuseteile entfernen (siehe Servicevorbereitungen).
2. Bei Messungen im Netzteil, den Kamerateil angeschlossen lassen. Sonst die Klemmfassung P 3503 entriegeln und das Folienkabel herausziehen.
3. Um die Aufnahmefunktionen zu überprüfen, ist ein Kamerasignal oder die Anschlußbox 8 619 590 724 mit der Meßschaltung (A) erforderlich. Diese sind, wie in Fig. 1 gezeigt, anzuschließen.

4. Electrical Adjustment Procedures (Recorder Section)

Test Equipment and Tools

The following equipment is required for adjustment:

1. D.V.M (Digital voltmeter)
2. Millivoltmeter
3. Dual Trace Oscilloscope
   Voltage Range: 0.005-50 V/div.
   Frequency Range: DC up to 20 MHz
   Probe: 10:1 and 1:1
4. Frequency counter
   Frequency Range: 0-10 MHz
5. Signal generator
6. Video sweep generator
   Frequency Range: 0-10 MHz
7. Colour TV Monitor
8. Trimming Tool
9. Video 8 Alignment Tape 8 627 105 128
10. Video 8 Blank cassette, Hi8 Blank cassette

Triggering Points

To trigger the scope, the following test points are used:

Horizontal Signals:	**Vertical Signals:**
Video Output	TP2001 (Head Switching Signal) or Video Output

Preparations

1. Remove the cabinet parts (see service preparation).
2. During measurements in the power section leave the camera section connected. Otherwise unlock connector P 3503 and pull out the flexible cables.
3. For checking the recording function a camera signal or the Y/C separator 8 619 590 724 with the test circuit (A) is necessary. Please connect as shown in Fig. 1.

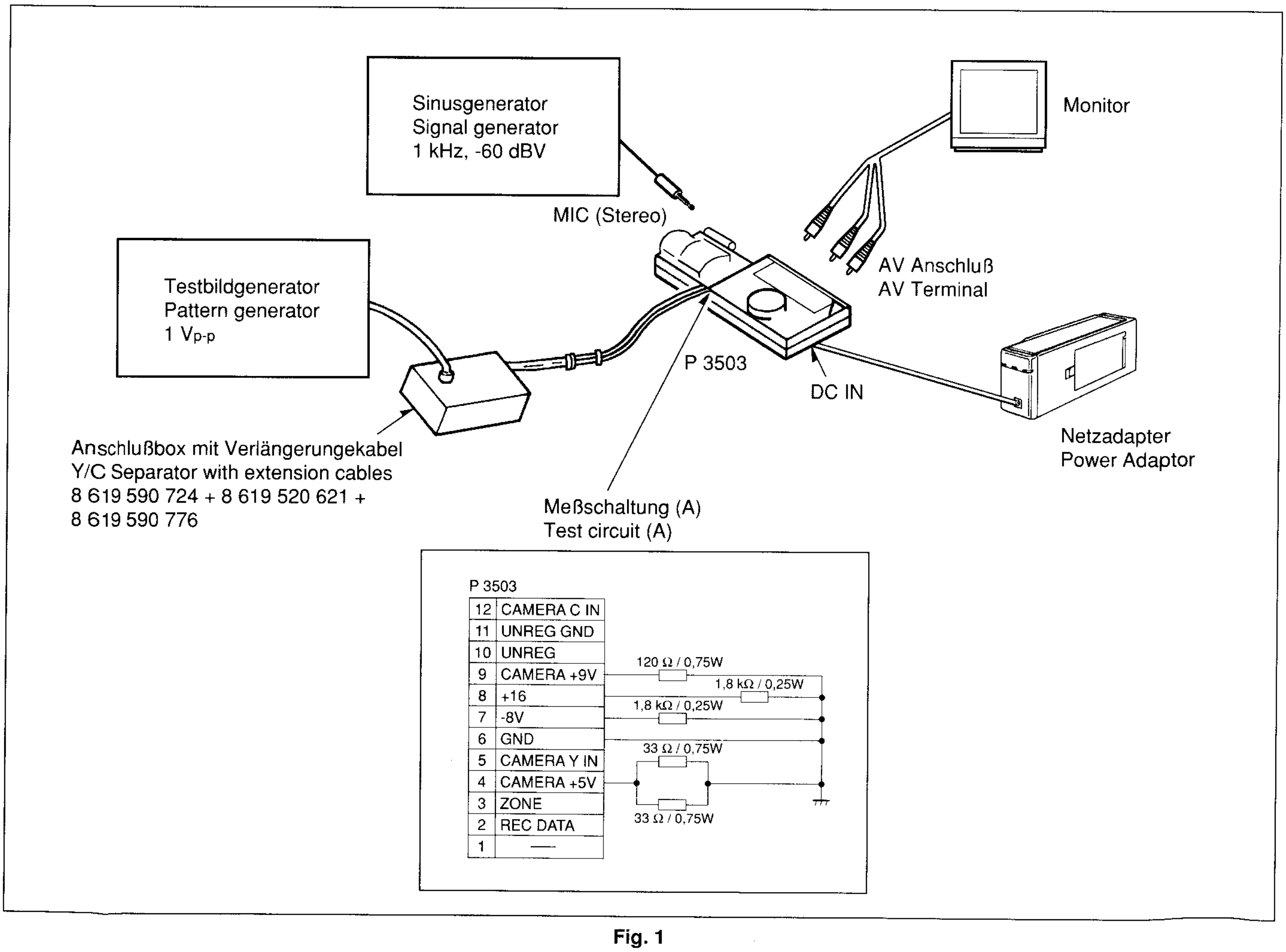

Sinusgenerator
Signal generator
1 kHz, -60 dBV
MIC (Stereo)
Monitor
Testbildgenerator
Pattern generator
1 Vp-p
AV Anschluß
AV Terminal
P 3503
DC IN
Netzadapter
Power Adaptor
Anschlußbox mit Verlängerungekabel
Y/C Separator with extension cables
8 619 590 724 + 8 619 520 621 +
8 619 590 776
Meßschaltung (A)
Test circuit (A)
P 3503
12 CAMERA C IN
11 UNREG GND
10 UNREG
9 CAMERA +9V
8 +16
7 -8V
6 GND
5 CAMERA Y IN
4 CAMERA +5V
3 ZONE
2 REC DATA
1 —
120 Ω / 0,75W
1,8 kΩ / 0,25W
1,8 kΩ / 0,25W
33 Ω / 0,75W
33 Ω / 0,75W

Fig. 1

Netzteil

4.1 Einstellung der Spannung + 5 V

Betriebsart	Stop
Meßpunkt	TP 1001
Einsteller	VR 1001
Spezifikation	5,05 V ± 0,025 V (5,10 V ± 0,025 V ohne Kamerateil)
Meßgerät	Digitalvoltmeter

4.2 Einstellung der Spannung + 9 V

Betriebsart	Stop
Meßpunkt	TP 1002
Einsteller	VR 1002
Spezifikation	8,6 V ± 0,05 V (8,65 V ± 0,05 V ohne Kamerateil)
Meßgerät	Digitalvoltmeter

Zusätzlich folgende Spannungen kontrollieren:

TP 1003 = 15,1 V ± 0,3 V
TP 1004 = -7,7 V ± 0,3 V
TP 1005 = +9,1 V ± 0,3 V

Systemsteuerungsteil

4.3 Einstellung der Unterspannungs-Abschaltung

Betriebsart	Stop (**mit Kamerateil**)
Meßpunkt	TP 6001 (OPERATE LED)
Einsteller	VR 6001
Spezifikation	6,7 V ± 0,05 V
Meßgeräte	Netzgerät, Oszilloskop

1. Den DC IN Stecker am Camcorder ziehen.
2. An die Batterieanschlüsse (Fig. 2) eine Gleichspannung von 6,7 ± 0,05 V anlegen.
3. Das Oszilloskop an TP 6001 anschließen.
4. Nun den Regler VR 6001 langsam von rechts nach links drehen, bis das Signal am TP 6001 zu pulsen beginnt.
   (Die Anzeige OPERATE beginnt zu blinken.)

Hinweise:

- Um das Blinken in der Anzeige zu löschen, ist die Versorgungsspannung kurz abzuschalten.
- Wird die Spannung über die DC-Buchse zugeführt, liegt der Abschaltpunkt bei 7 V ± 0,05 V.

Power Section

4.1 + 5 V Adjustment

Mode	Stop
Testpoint	TP 1001
Adjuster	VR 1001
Specification	5.05 V ± 0.025 V (5.10 V ± 0,025 V without Camera unit)
M.EQ.	D.V.M.

4.2 + 9 V Adjustment

Mode	Stop
Testpoint	TP 1002
Adjuster	VR 1002
Specification	8.6 V ± 0.05 V (8.65 V ± 0.05 V without Camera unit)
M.EQ.	D.V.M.

Confirm the following voltages:

TP 1003 = 15.1 V ± 0.3 V
TP 1004 = -7.7 V ± 0.3 V
TP 1005 = +9.1 V ± 0,3 V

System Control Section

4.3 Under Cut Adjustment

Mode	Stop (**with camera unit**)
Testpoint	TP 6001 (OPERATE LED)
Adjuster	VR 6001
Specification	6.7 V ± 0.05 V
M.EQ.	DC Power Supply, Oscilloscope

1. Disconnect the DC IN connector of the camcorder.
2. Supply a DC of 6.7 V ± 0.05 V to the battery terminal (Fig. 2).
3. Connect the oscilloscope to TP 6001.
4. Slowly turn control VR 6001 from the right to left direction until the signal at TP 6001 shows intermittent amplitude.
   (Indication OPERATE starts blinking.)

Notes:

- By short interuption of the power supply the blinking of the indication can be stopped.
- Supplying a DC voltage via the DC socket, the under cut level should be 7 V ± 0.05 V.

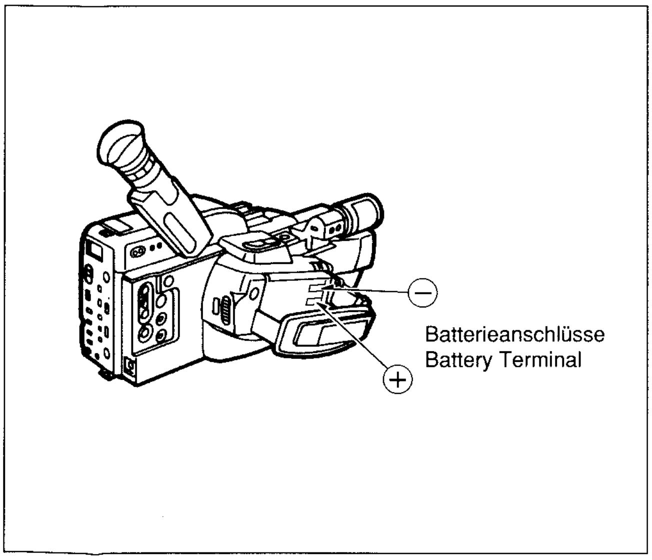


Fig. 2

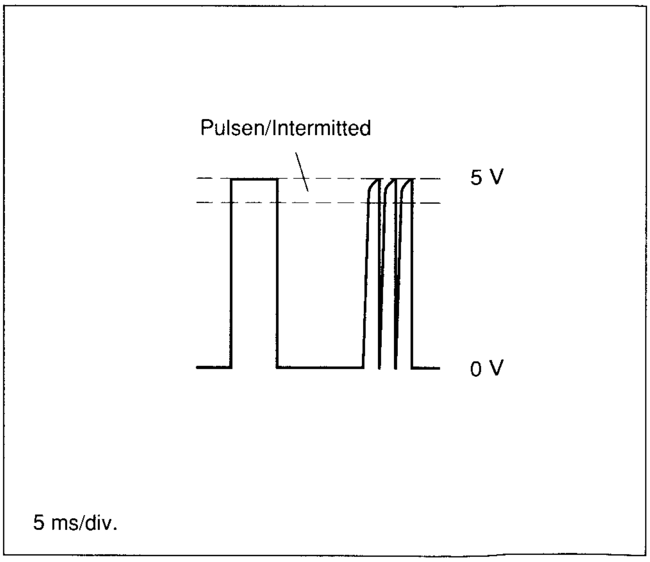


Fig. 3

4.4 Einstellung der Anzeige im Sucher

Betriebsart	Stop
Meßpunkt	Sucher-Monitor
Einsteller	C 6004
Spezifikation	Anzeigen auf Mitte
Meßgerät	Sucher-Monitor

1. Den Sucher an den Camerarecorder anschließen.
2. Die Batterieanzeige und das Bandzählwerk im Sucher betrachten.
3. Mit C 6004 die Anzeige im Sucher in Mittelstellung bringen (Fig. 4).

4.4 Character Position Adjustment

Mode	Stop
Testpoint	View Finder
Adjuster	C 6004
Specification	Character is center
M.EQ.	View Finder

1. Connect the EVF to the camcorder.
2. Observe the battery indicator and counter number on the EVF.
3. Adjust C 6004 so that the character position is in the middle of the EVF (Fig. 4).

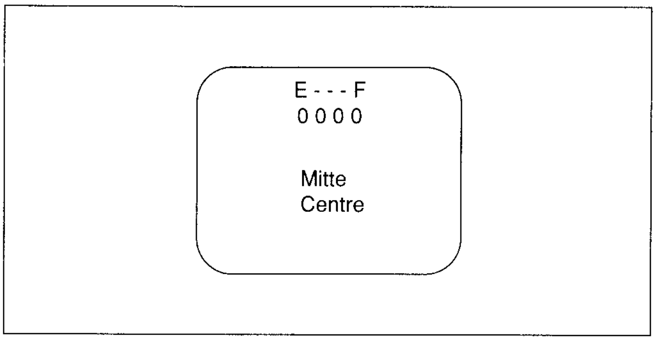


Fig. 4

Servoteil

4.5 Einstellung des Kopfumschaltimpulses

Kassette	Video 8 -Testkassette
Betriebsart	Wiedergabe
Meßpunkt	TP 2001/Video Ausgang
Einsteller	VR 2001
Spezifikation	6,5 H ± 0,5 H
Meßgerät	Oszilloskop

1. Das Oszilloskop Kanal 1 an den Video Ausgang und Kanal 2 an TP 2001 (Kopfumschaltimpuls) anschließen.
2. VR 2001 so einstellen, daß die Flanke des Kopfumschaltimpulses 6,5 ± 0,5 Zeilen vor dem V. Synchronimpuls liegt.

Servo Section

4.5 PG Shifter Adjustment

Cassette	Video 8 Alignm. tape
Mode	Playback
Testpoint	TP 2001/Video Out
Adjuster	VR 2001
Specification	6.5 H ± 0.5 H
M.EQ.	Oscilloscope

1. Connect the oscilloscope CH 1 to Video out and CH 2 to TP 2001 (head switching pulse).
2. Adjust VR 2001 so that edge of the head switching pulse at TP 2001 is set at 6.5 ± 0.5 H from V. sync.

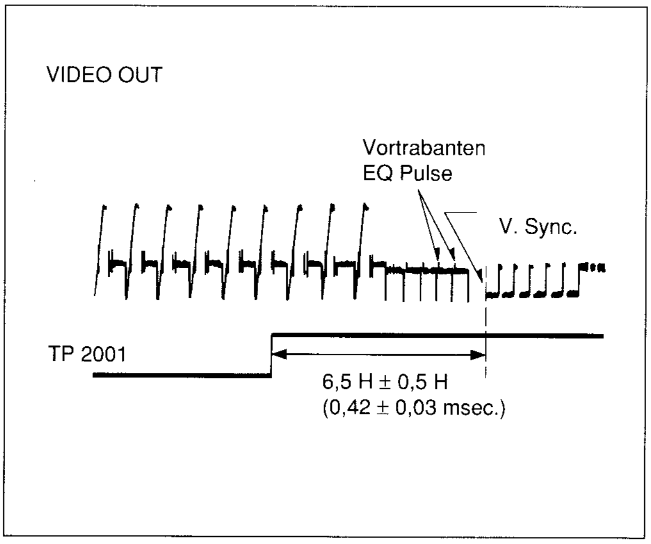


Fig. 5

4.6 Slow-Freilaufeinstellung

Kassette	Video 8 -Kassette
Betriebsart	Standbild
Meßpunkt	TP 2003
Einsteller	VR 2004
Spezifikation	1230 ± 50 Hz
Meßgerät	Frequenzzähler

1. Mit einer Leerkassette ein Standbild wiedergeben.
2. TP 2002 nach Masse kurzschließen.
3. Den Frequenzzähler an TP 2003 anschließen.
4. Mit VR 2004 eine Frequenz von 1230 ± 50 Hz einstellen.

4.6 Slow Free Run Adjustment

Cassette	Video 8 Cassette
Mode	Still
Testpoint	TP 2003
Adjuster	VR 2004
Specification	1230 ± 50 Hz
M.EQ.	Frequency counter

1. Play back the blank cassette and place the Still mode.
2. Connect the jumper wire between TP 2002 and GND.
3. Connect the frequency counter to TP 2003.
4. Adjust the VR 2004 so that frequency is 1230 ± 50 Hz.

4.7 Einstellung auf minimales Bildzittern (Standbild/Slow)

Kassette	Video 8 -Kassette
Betriebsart	Standbild/Zeitlupe
Meßpunkt	Monitor
Einsteller	VR 1003 (V.LOCK), VR 1004 (SLOW TRACK)
Spezifikation	Bildzittern auf MInimum
Meßgerät	Monitor
Signal	Kamera

1. Eine Kameraaufnahme durchführen. Die gemachte Aufnahme wiedergeben.
2. Die Taste „PAUSE/STILL" drücken.
3. Mit VR 1003 „V-LOCK" (V) an der Seite des Gerätes das Bildzittern auf Minimum einstellen.
4. Das Gerät auf Wiedergabe und anschließend auf Zeitlupe „SLOW" schalten.
5. Mit VR 1004 „SLOW TRACKING" (S) an der Seite des Gerätes das Bildzittern auf Minimum einstellen.
   Wird ein anderes Fernsehgerät für die Wiedergabe verwendet, muß evtl. diese Einstellung wiederholt werden. Dies ist bei motiertem Gerät möglich (siehe auch Seite 1-3).

4.7 V. Dancing Adjustment (Still/Slow mode)

Cassette	Video 8 Cassette
Mode	StIll/Slow
Testpoint	Monitor
Adjuster	VR 1003 (V.LOCK), VR 1004 (SLOW TRACK)
Specification	V. dancing is minimised
M.EQ.	Monitor
Signal	Camera

1. Record a camera signal. Rewind the tape and playback the just record portion.
2. Press The "PAUSE/STILL" key.
3. Adjust VR 1003 "V-LOCK" (V) so that V. dancing will not appear on the monitor.
4. Switch the unit to playback and afterwards to slowmotion "Slow".
5. Time the jumping pictures to a minimum by means of VR 1004 " SLOW TRACKING" (S) at the side of the set.
   If another TV set is used for playback, this adjustment might have to replated. This is be possible with assembled unit (see page 1-3).

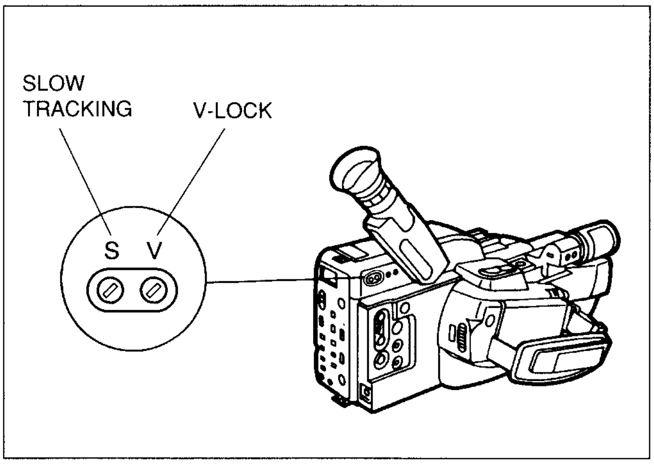


Fig. 6

4.8 Einstellung des EE-Pegels

Betriebsart	Stop
Meßpunkt	Video-Ausgang
Einsteller	VR 3001
Spezifikation	A = 1,0 V ± 0,05 V_{ss} (mit 75 Ω)
Meßgerät	Oszilloskop
Eingang	Farbbalken (Abschlußbox)

1. Ein Farbbalkensignal in den Video-Eingang der Anschlußbox einspeisen bzw. auf Kamerabetrieb schalten.
2. Das Gerät auf Stop schalten.
3. Das Oszilloskop an den Video Ausgang anschließen.
4. Mit VR 3001 den Pegel „A" auf 1,0 ± 0,05 V_{ss} einstellen.
   (Mit 75 Ω Abschlußwiderstand. Ohne 75 Ω Abschlußwiderstand beträgt der Pegel 2,0 ± 0,1 V_{ss}.)

4.8 EE Level Adjustment

Mode	Stop
Testpoint	Video Out
Adjuster	VR 3001
Specification	A = 1.0 V ± 0.05 $V_{p\text{-}p}$ (with 75 Ω)
M.EQ.	Oscilloscope
Input	Colour bar (Y/C Separator)

1. Supply a colour bar signal to the video input (Y/C Separator) or set the unit into camera mode.
2. Set the unit into stop mode.
3. Connect the oscilloscope to video output.
4. Adjust VR 3001 so that the "A" level is 1.0 ± 0.05 $V_{p\text{-}p}$.
   (With 75 ohms termination. "A" is 2.0 ± 0.01 $V_{p\text{-}p}$ without 75 ohms termination.)

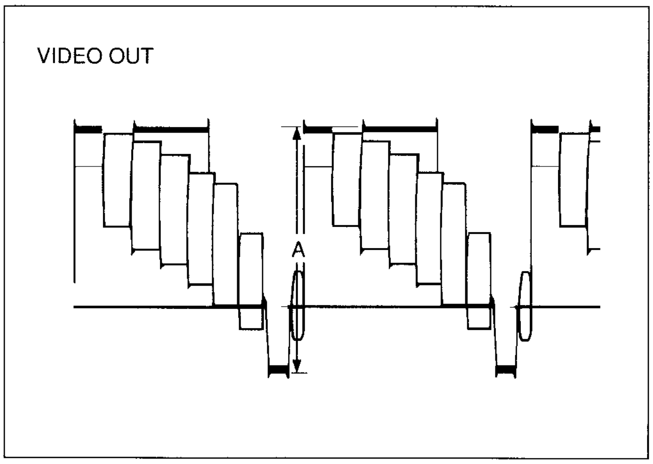


Fig. 7

4.9 Einstellung der Sync.-Spitze und des Hubs

4.9.1 Einstellung für Video 8

Kassette	Video 8 -Testkassette
Betriebsart	Stop, Aufnahme und Wiedergabe
Meßpunkt	TP 3004
Einsteller	VR 3003, VR 3002
Spezifikation	1,0 ± 0,1 V_{ss} (mit 75 Ω), 4,25 ± 0,05 MHz / 4,8 ± 0,05MHz
Meßgeräte	Oszilloskop, Frequenzzähler
Signal	Kamera

1. Die Video 8 -Testkassette wiedergeben. Mit dem Oszilloskop am Video-Ausgang den 100% Weißpegel kontrollieren. Der Sollwert ist 1,0 ± 0,1 V_{ss} (mit 75 Ω Abschlußwiderstand). Dieser Wert ist mit VR 3008 einstellbar (Punkt 4.12).
2. Dem Gerät kein Videosignal zuführen (Rekorderbetrieb). Das Gerät auf Stop schalten.
3. Den Frequenzzähler an TP 3004 anschließen und mit VR 3003 eine Frequenz von 4,25 ± 0,05 MHz einstellen.
4. Nun im Kamerabetrieb das Testbild log. Grauskala aufnehmen.
5. Mit VR 3002 eine Frequenz von 4,8 ± 0,05 MHz einstellen.
6. Das Farbsignal einige Minuten lang aufnehmen.
7. Das Oszilloskop an den Video-Ausgang anschließen und die gemachte Aufnahme wiedergeben.
   Kontrollieren, ob der Videopegel 1,0 ± 0,1 V_{ss} beträgt (mit 75 Ω Abschlußwiderstand). Weicht der Pegel ab, die Einstellung von VR 3002 (Punkte 4. bis 7.) wiederholen.

Hinweis:

Bei weißen Flächen darf das Bild keine Fahnen zeigen.

4.9.2 Einstellung für (Hi8)

Kassette	Hi8-Kassette
Betriebsart	Stop, Aufnahme und Wiedergabe
Meßpunkt	TP 3004
Einsteller	VR 3004, VR 3005
Spezifikation	1,0 ± 0,1 V_{ss} (mit 75 Ω), 5,6 ± 0,05 MHz / 6,47 ± 0,05 MHz
Meßgeräte	Oszilloskop, Frequenzzähler
Signal	Kamera

1. Eine bespielte Hi8-Kassette wiedergeben. Mit dem Oszilloskop am Video-Ausgang den 100% Weißpegel kontrollieren. Der Sollwert ist 1,0 ± 0,1 V_{ss} (mit 75 Ω Abschlußwiderstand). Dieser Wert ist mit VR 3007 einstellbar (Punkt 4.12).
2. Dem Gerät kein Videosignal zuführen (Rekorderbetrieb). Das Gerät auf Stop schalten.
3. Den Frequenzzähler an TP 3004 anschließen und mit VR 3004 eine Frequenz von 5,6 ± 0,05 MHz einstellen.
4. Nun im Kamerabetrieb das Testbild log. Grauskala aufnehmen.
5. Mit VR 3005 eine Frequenz von 6,47 ± 0,05 MHz einstellen.
6. Das Farbsignal einige Minuten lang aufnehmen.
7. Das Oszilloskop an den Video-Ausgang anschließen und die gemachte Aufnahme wiedergeben.
   Kontrollieren, ob der Videopegel 1,0 ± 0,1 V_{ss} beträgt (mit 75 Ω Abschlußwiderstand). Weicht der Pegel ab, die Einstellung von VR 3005 (Punkte 4. bis 7.) wiederholen.

Hinweis:

Bei weißen Flächen darf das Bild keine Fahnen zeigen.

4.10 Einstellung der Weiß- und Schwarzwert spitzen

4.10.1 Einstellung für Video 8

Betriebsart	Stop
Meßpunkt	TP 3003
Einsteller	VR 3013, VR 3006
Spezifikation	siehe Fig. 8
Meßgeräte	Oszilloskop
Signal	Kamera

1. Das Testbild log. Grauskala aufnehmen.
2. Das Gerät auf Stop schalten.
3. Das Oszilloskop an TP 3003 anschließen.

4.9 Deviation/Sync. Tip Adjustment

4.9.1 Adjustment for Video 8

Cassette	Video 8 Alignment Tape
Mode	Stop, Recording and Playback
Testpoint	TP 3004
Adjuster	VR 3003, VR 3002
Specification	1.0 ± 0.1 V_{p-p} (with 75 Ω), 4.25 ± 0,05 MHz / 4.8 ± 0.05MHz
M.EQ.	Oscilloscope, Frequency counter
Signal	Camera

1. Playback the Video 8 Alignment tape section and connect the oscilloscope to Video out. Confirm that 100% white level is 1.0±0.1 V_{p-p} (with 75 Ω termination). If it is not, adjust VR 3008 (see 4.12).
2. Do not supply any video signal (VTR mode). Set the unit into Stop mode.
3. Connect the frequency counter to TP 3004 and adjust VR 3003 so that the frequency is 4.25 ± 0.05 MHz.
4. Set the unit to camera mode (gray scale chart).
5. Adjust VR 3002 so that the frequency is 4.8 ± 0.05 MHz.
6. Record the color signal for a few minutes.
7. Connect the oscilloscope to video out and playback the just recorded portion.
   Confirm that video peak to peak level is 1.0 ± 0.1 V_{p-p} (with 75 Ω termination). If it is not, adjust VR 3002 again and repeat item 4. to item 7.

Note:

With white areas, the pictures must no show any hangover effects.

4.9.2 Adjustment for (Hi8)

Cassette	Hi8 Cassette
Mode	Stop, Recording and Playback
Testpoint	TP 3004
Adjustment	VR 3004, VR 3005
Specification	1.0 ± 0.1 V_{p-p} (with 75 Ω), 5.6 ± 0.05 MHz / 6.47 ± 0.05 MHz
M.EQ.	Oscilloscope, Frequency counter
Signal	Camera

1. Playback the Hi8 Cassette and connect the oscilloscope to Video out. Confirm that 100% white level is 1.0 ± 0.1 V_{p-p} (with 75 Ω termination). If it is not, adjust VR 3007 (see 4.12).
2. Do not supply any video signal (VTR mode). Set the unit into Stop mode.
3. Connect the frequency counter to TP 3004 and adjust VR 3004 so that the frequency is 5.6 ± 0.05 MHz.
4. Set the unit to camera mode (gray scale chart).
5. Adjust VR 3005 so that the frequency is 6.47 ± 0.05 MHz.
6. Record the color signal for a few minutes.
7. Connect the oscilloscope to video out and playback the just recorded portion.
   Confirm that video peak to peak level is 1.0 ± 0.1 V_{p-p} (with 75 Ω termination). If it is not, adjust VR 3005 again and repeat item 4. to item 7.

Note:

With white areas, the pictures must no show any hangover effects.

4.10 White Clip/Dark Clip Adjustment

4.10.1 Adjustment for Video 8

Mode	Stop
Testpoint	TP 3003
Adjuster	VR 3013, VR 3006
Specification	see Fig. 8
M.EQ.	Oscilloscope
Signal	Camera

1. Record a camera signal (gray scale chart).
2. Set the unit into Stop mode.
3. Connect the oscilloscope to TP 3003.

4. Mit VR 3013 die Amplitude der Schwarzspitzen auf W 2 = 170% ± 5% des Videopegels einstellen (Fig. 8).
5. Mit VR 3006 die Amplitude der Weißspitzen auf W 1 = 170% ± 5% des Videopegels einstellen (Fig. 8).

4. Adjust VR 3013 so that the dark clip level W 2 is 170% ± 5% (Fig. 8).
5. Adjust VR 3006 so that the white clip level W 1 is 170% ± 5% as shown in Fig. 8.

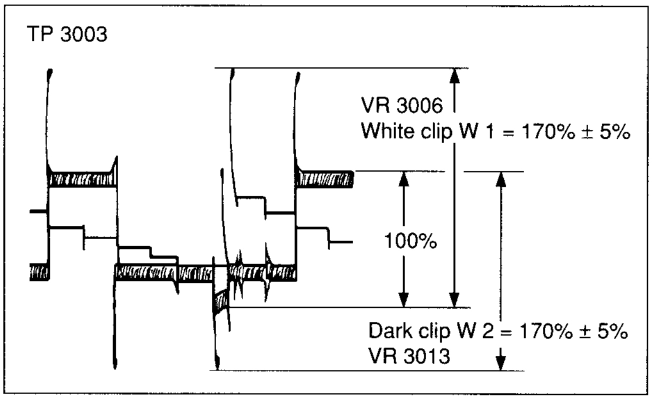


Fig. 8

4.10.2 Einstellung für Hi8

Betriebsart	Stop
Meßpunkt	TP 3002
Einsteller	VR 3011, VR 3010
Spezifikation	siehe Fig. 9
Meßgeräte	Oszilloskop
Signal	Kamera

1. Das Testbild log. Grauskala aufnehmen.
2. Das Gerät auf Stop schalten.
3. Das Oszilloskop an TP 3002 anschließen.
4. Mit VR 3011 die Amplitude der Schwarzspitzen auf 170% ± 5% des Videopegels einstellen (Fig. 9).
5. Mit VR 3010 die Amplitude der Weißspitzen auf 170% ± 5% des Videopegels einstellen (Fig. 9).

4.10.2 Adjustment for Hi8

Mode	Stop
Testpoint	TP 3002
Adjuster	VR 3011, VR 3010
Specification	see Fig. 9
M.EQ.	Oscilloscope
Signal	Camera

1. Record a camera signal (gray scale chart).
2. Set the unit into Stop mode.
3. Connect the oscilloscope to TP 3002.
4. Adjust VR 3011 so that the dark clip level W 2 is 170% ± 5% (Fig. 9).
5. Adjust VR 3010 so that the white clip level W 1 is 170% ± 5% as shown in Fig. 9.

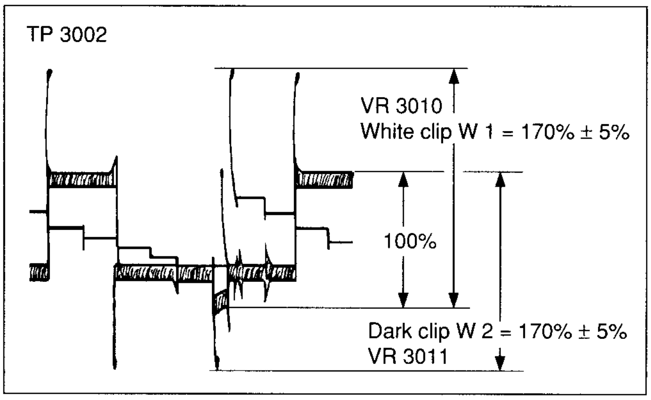


Fig. 9

4.11 Einstellung des Aufnahmestromes (Video 8)

Kassette	Video 8 -Kassette
Betriebsart	Aufnahme
Meßpunkte	P 5003/1 (Heiß), P 5003/2 (Masse)
Einsteller	VR 8001, VR 3014
Spezifikation	Farbpegel = 35 ± 5 mV$_{ss}$, Luminanzpegel = 150 ± 10 mV$_{ss}$
Meßgerät	Oszilloskop
Signal	Kamera

1. Einen Kondensator 100 µF / 16 V von IC 3501 Pin 1 nach Masse schalten.
2. Mit VR 8001 am P 5003/1 (Heiß), P 5003/2 (Masse) der Kopfverstärker-Platine einen Farbpegel von 35 ± 5 mV$_{ss}$ einstellen (Fig.10).
3. Den Kondensator entfernen und mit VR 3014 einen Luminanzpegel von 150 ± 10 mV$_{ss}$ einstellen.

4.11 Rec Current Adjustment (Video 8)

Cassette	Video 8 Cassette
Mode	Recording
Testpoints	P 5003/1 (Hot), P 5003/2 (GND)
Adjuster	VR 8001, VR 3014
Specification	Chroma level = 35 ± 5 mV$_{p-p}$, Luminanz level = 150 ± 10 mV$_{p-p}$
M.EQ.	Oscilloscope
Signal	Camera

1. Connect the 16 V / 100 µF capacitor between IC 3005 Pin 1 and ground.
2. Adjust VR 8001 so that chroma level at P 5003/1 (Hot), P 5003/ (GND) of the Head Amplifier C.B.A. is 35 ± 5 mV$_{p-p}$ (Fig. 10).
3. Remove the capacitor and adjust VR 3014 so that video peak level is 150 ± 10 mV$_{p-p}$.

Hinweis:

Bei dieser Einstellung darf das Oszilloskop nicht mit Masse verbunden sein.
Es muß daher über einen Trenntrafo betrieben werden.

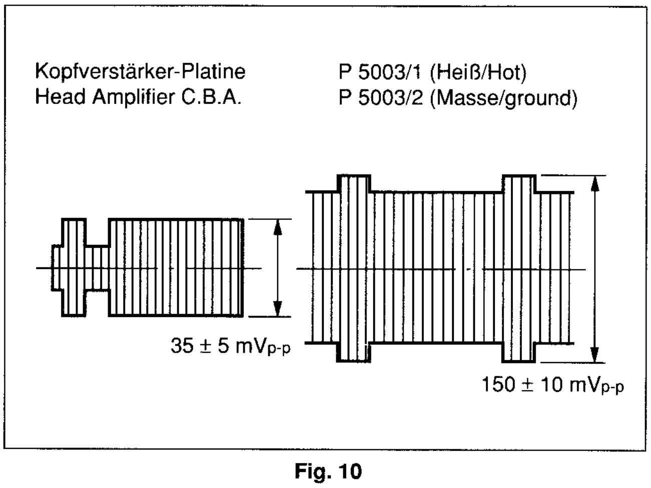


Fig. 10

Note:

During this adjustment, the oscilloscope must be driven via a isolating transformer. Confirm that the oscilloscope is not connected with ground.

4.12 Einstellung des Wiedergabepegels

Kassette	Video 8 -Testkassette und Hi8
Betriebsart	Wiedergabe (Eigenaufnahme)
Meßpunkt	Video-Ausgang
Einsteller	VR 3008, VR 3007
Spezifikation	A = 1,0 V ± 0,05 V_{ss} (mit 75 Ω)
Meßgeräte	Oszilloskop

1. Die Video 8 -Testkassette oder eine Eigenaufnahme wiedergeben.
2. Das Oszilloskop an den Video-Ausgang anschließen.
3. Mit VR 3008 den Pegel „A" auf 1,0 ± 0,05 V_{ss} einstellen (Fig. 11). (Mit 75 Ω Abschlußwiderstand. Ohne 75 Ω Abschlußwiderstand beträgt der Pegel 2,0 ± 0,1 V_{ss}).
4. Nun auf einer Hi8-Kassette eine Hi8-Aufnahme durchführen und diese wiedergeben.
5. Mit VR 3007 den Pegel „A" auf 1,0 ± 0,05 V_{ss} einstellen (Fig. 11). (Mit 75 Ω Abschlußwiderstand. Ohne 75Ω Abschlußwiderstand beträgt der Pegel 2,0 ± 0,1 V_{ss}).

4.12 Video Playback Level Adjustment

Cassette	Video 8 Alignm. Tape and Hi8
Mode	Playback (self recording)
Testpoint	Video Out
Adjuster	VR 3008, VR 3007
Specification	A = 1.0 V ± 0.05 V_{p-p} (with 75 Ω)
M.EQ.	Oscilloscope

1. Playback the Video 8 Alignment tape or the just recorded position.
2. Connect the oscilloscope to video output.
3. Adjust VR 3008 so that the "A" level is 1.0 ± 0.05 V_{p-p} (Fig. 11). (With 75 ohms termination. "A" is 2.0 ± 0.01 V_{p-p} without 75 ohms termination.)
4. Record the color signal with a Hi8 Cassette for a few minutes (Hi8 mode).
5. Adjust VR 3007 so that the "A" level is 1.0 ± 0.05 V_{p-p} (Fig. 11). (With 75 ohms termination. "A" is 2.0 ± 0.01 V_{p-p} without 75 ohms termination.)

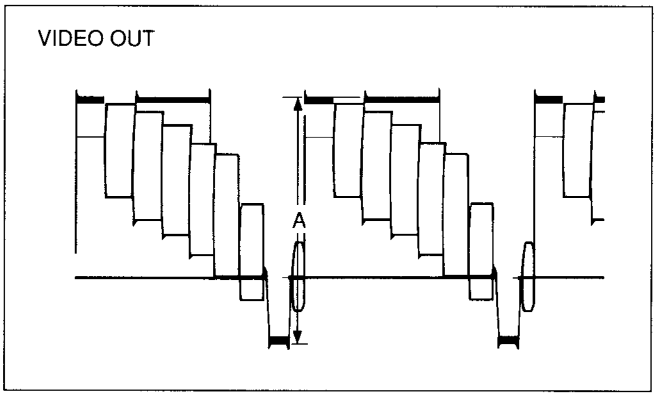


Fig. 11

4.13 Einstellung auf Rauschminimum

Kassette	Video 8 -Kassette
Betriebsart	Eigenaufnahme
Meßpunkt	TP 3001
Einsteller	VR 3017
Spezifikation	Minimum
Meßgeräte	Oszilloskop

1. Ein Farbbild aufnehmen.
2. Das aufgezeichnete Signal wiedergeben.
3. Das Oszilloskop an TP 3001 anschließen.
4. Mit VR 3017 das Signal am TP 3001 auf Minimum abgleichen.

4.13 Line Noise Cancel Adjustment

Cassette	Video 8 Cassette
Mode	Self recording
Testpoint	TP 3001
Adjuster	VR 3017
Specification	Minimum
M.EQ.	Oscilloscope

1. Record the camera signal (color chart).
2. Playback the just recorded portion.
3. Connect a oscilloscop to TP 3001.
4. Adjust VR 3017 so that waveform at TP 3001 is minimized.

4.14 Einstellung der Chroma- Rauschunterdrückung

Kassette	Video 8 -Kassette
Betriebsart	Eigenaufnahme
Meßpunkt	TP 8001
Einsteller	VR 8003, VR 8004
Spezifikation	Minimum
Meßgeräte	Oszilloskop
Signal	Kamera

1. Ein Farbtestbild aufnehmen.
2. Das aufgenommene Signal wiedergeben.
3. Das Oszilloskop an TP 8001 anschließen.
4. Mit VR 8003 und VR 8004 den Pegel auf Minimum einstellen.

4.14 Chroma Noise Reduction

Cassette	Video 8 Cassette
Mode	Self recording
Testpoint	TP 8001
Adjuster	VR 8003, VR 8004
Specification	Minimum
M.EQ.	Oscilloscope
Signal	Camera

1. Record the camera signal (color chart).
2. Playback the just recorded portion.
3. Connect a oscilloscop to TP 8001.
4. Adjust VR 8003 and VR 8004 so that the waveform is minimized.

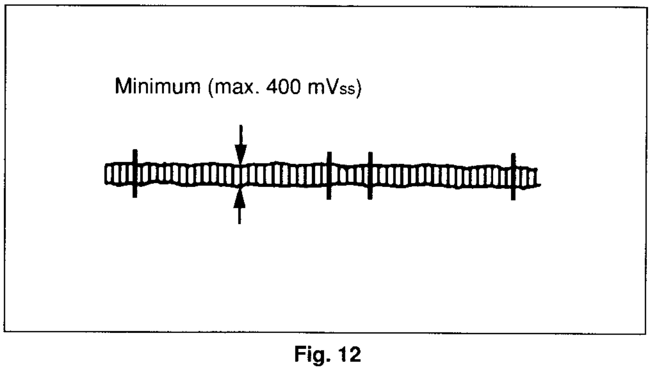


Fig. 12

4.15 Einstellung des S-Begrenzers

Kassette	Hi8-Leerkassette
Betriebsart	Wiedergabe
Meßpunkt	TP 3005
Einsteller	VR 3015
Spezifikation	150 mVss ± 20 mVss
Meßgeräte	Videowobbler, Oszilloskop
Signal	7 MHz / 0,2 Vss

1. Vom Videowobbler ein Signal (7 MHz / 0,2 Vss ohne Sync.) über 0,01 µF an TP 3006 anlegen.
2. Das Gerät auf Wiedergabe schalten (unbespielte Hi8-Kassette).
3. Mit VR 3015 am TP 3005 einen Pegel von 150 ± 20 mVss einstellen.

4.16 Einstellung des Video-Frequenzganges

Hinweise (Modifikation):

Um mit der Anschlußbox 8 619 590 724 den Video-Frequenzgang abgleichen zu können, ist es erforderlich, die Farbfalle (4,43 MHz) im Luminanzzweig der Anschlußbox zu entfernen. Dazu die Spule (Fig. 13) hochlöten bzw. über einen zusätzlichen Schalter abschalten. Zusätzlich die Meßschaltung (A) Fig. 13 verwenden.

4.15 S. Limiter Adjustment

Cassette	Hi8 Blank cassette
Mode	Playback
Testpoint	TP 3005
Adjuster	VR 3015
Specification	150 mVp-p ± 20 mVp-p
M.EQ.	Sweep gen., Oscilloscope
Signal	7 MHz / 0.2 Vp-p

1. Supply the video sweep generator output (7 MHz / 0,2 Vp-p without Sync.) over 0.01 µF at TP 3006.
2. Set the unit into playback mode Hi8 Blank cassette.
3. Adjust VR 3015 so that the level at TP 3005 is 150 ± 20 mVp-p.

4.16 Video Frequency Response Adjustment

Notes (Modification):

In order to align the video frequency response by using the Y/C Separator 8 619 590 724 it is necessary to first disconnect the colour trap (4.43 MHz) in the luminance path of the Y/C Separator. For this desolder the coil (Fig. 13), respectively disconnect it via an additional switch.(In addition use the test circuit (A) Fig. 13.)

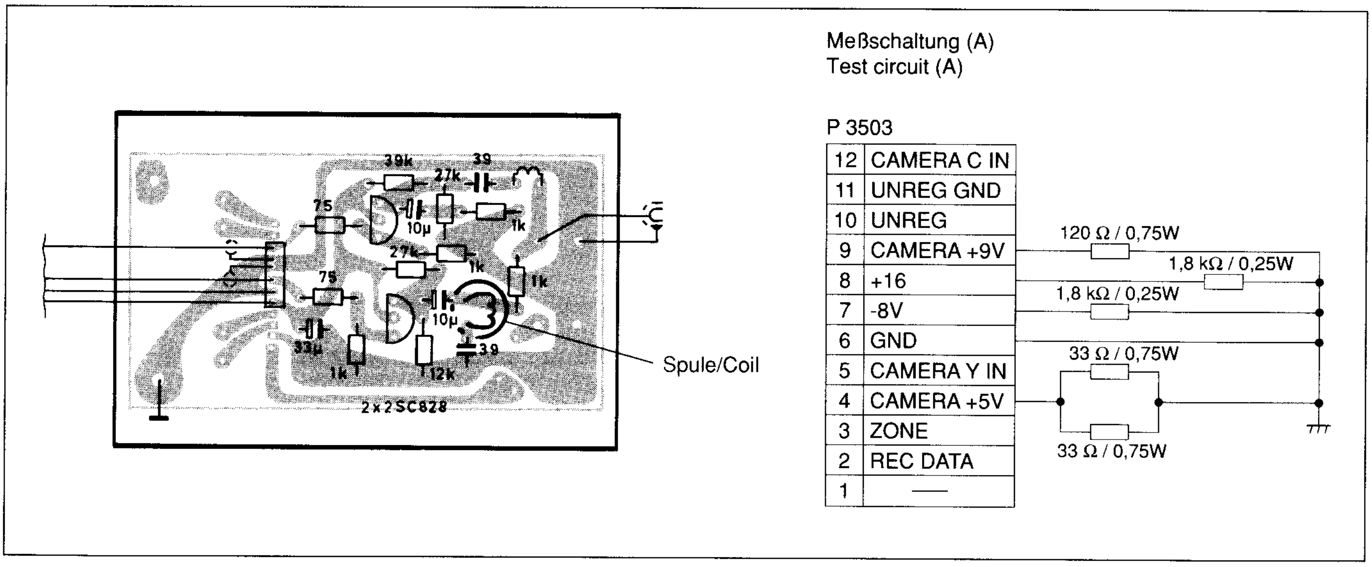

39k
27k
39
75
10µ
1k
27k
1k
1k
75
10µ
39
33µ
1k
12k
2x2SC828
Spule/Coil
Meßschaltung (A)
Test circuit (A)
P 3503
12 CAMERA C IN
11 UNREG GND
10 UNREG
9 CAMERA +9V
8 +16
7 -8V
6 GND
5 CAMERA Y IN
4 CAMERA +5V
3 ZONE
2 REC DATA
1 —
120 Ω / 0,75W
1,8 kΩ / 0,25W
1,8 kΩ / 0,25W
33 Ω / 0,75W
33 Ω / 0,75W

Fig. 13

4.16.1 Einstellung des Frequenzganges bei Video 8

Kassette	Video 8 -Kassette
Betriebsart	Eigenaufnahme (Video 8)
Meßpunkt	Video-Ausgang
Einsteller	VR 3018
Spezifikation	A = - 2 ± 1 dB (71 ~ 89%)
Meßgeräte	Videowobbler / Oszilloskop
Eingang	Videowobbler (Anschlußbox)

1. Die Ausgangsspannung des Wobblers, wie in Fig. 14 gezeigt, einstellen, in den Video-Eingang der Anschlußbox einspeisen und das Signal aufzeichnen (Video 8).
2. Die gerade gemachte Aufnahme wiedergeben.
3. Mit VR 3018 eine Kurvenform, wie in Fig. 15 gezeigt, einstellen.

4.16.1 Video 8 Frequency Response Adjustment

Cassette	Video 8 -Kassette
Mode	Self Recording (Video 8)
Testpoint	Video Out
Adjuster	VR 3018
Specification	A = - 2 ± 1 dB (71 ~ 89%)
M.EQ.	Video Sweep / Oscilloscope
Input	Colour Bar (Y/C Separator)

1. Set the sweep generator output as shown in Fig. 14, supply the signal to the video in (Y/C Separator) and record the signal (Video 8).
2. Play back the just recorded portion.
3. Adjust VR 3018 so that the waveform becomes as shown in Fig. 15.

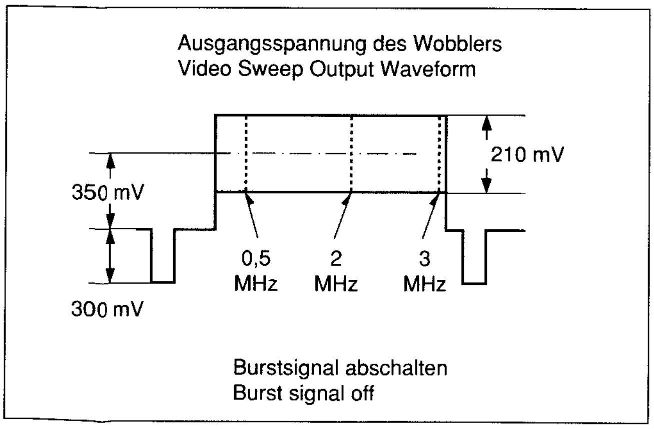

Ausgangsspannung des Wobblers
Video Sweep Output Waveform
210 mV
350 mV
300 mV
0,5 MHz
2 MHz
3 MHz
Burstsignal abschalten
Burst signal off

Fig. 14

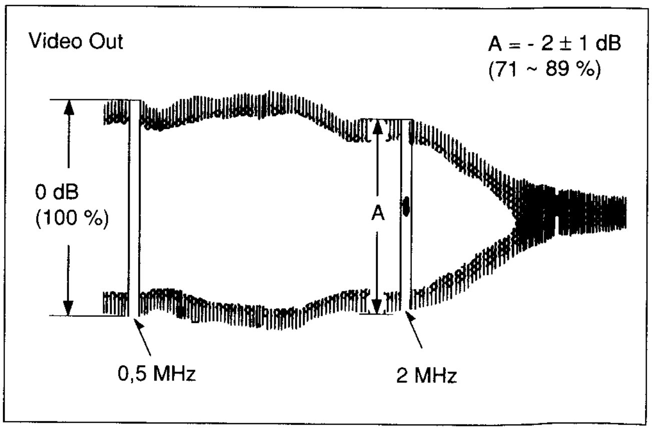


Fig. 15

4.16.2 Einstellung des Frequenzganges bei Hi8

Kassette	Hi8-Kassette
Betriebsart	Eigenaufnahme (Hi 8)
Meßpunkt	Video-Ausgang
Einsteller	VR 3016
Spezifikation	- 5 ± 1 dB (50 - 63%)
Meßgeräte	Videowobbler / Oszilloskop
Signal	Videowobbler (Anschlußbox)

1. Die Ausgangsspannung des Wobblers, wie in Fig. 16 gezeigt, einstellen, in den Video-Eingang der Anschlußbox einspeisen und das Signal aufzeichnen (Hi8).
2. Die gerade gemachte Aufnahme wiedergeben.
3. Mit VR 3016 eine Kurvenform, wie in Fig. 17 gezeigt, einstellen.

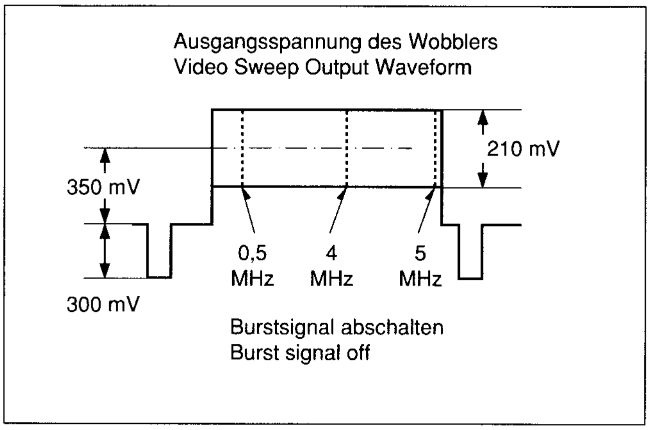


Fig. 16

4.17 Einstellung der 4,43 MHz-Frequenz

Kassette	Video 8 -Kassette
Betriebsart	Wiedergabe (Leerkassette)
Meßpunkt	TP 8003
Einsteller	VC 8001
Spezifikation	4,433619 MHz ± 50 Hz
Meßgerät	Frequenzzähler

1. Eine unbespielte Cassette wiedergeben.
2. Den Frequenzzähler an TP 8003 anschließen.
3. Mit VC 8001 eine Frequenz von 4,433619 MHz ± 50 Hz einstellen.

4.18 VCO-Einstellung

Kassette	Video 8 -Kassette
Betriebsart	Stop
Meßpunkt	TP 8002
Einsteller	VR 8002
Spezifikation	5,859 ± 0,01 MHz
Meßgerät	Frequenzzähler

1. Das Gerät auf Stop schalten.
2. Den Frequenzzähler an TP 8002 anschließen.
3. Mit VR 8002 von rechts beginnend, eine Frequenz von 5,859 ± 0,01 MHz einstellen.

Tonteil

4.19 VCO-Einstellung für FM-Audio

Betriebsart	Stop
Meßpunkt	TP 4002
Einsteller	VR 4001
Spezifikation	1,5 MHz ± 5 kHz
Meßgeräte	Frequenzzähler
Signal	Kein Signal

1. Kein Videosignal und kein Audiosignal einspeisen (Rekorderbetrieb).
2. Den Frequenzzähler an TP 4002 anschließen.
3. Mit VR 4001 die Frequenz auf 1,5 MHz ± 5 kHz einstellen.

4.16.2 Hi8 Frequency Response Adjustment

Cassette	Hi8 Cassette
Mode	Self Recording (Hi 8)
Testpoint	Video Output
Adjuster	VR 3016
Specification	- 5 ± 1 dB (50 - 63%)
M.EQ.	Video Sweep / Oscilloscope
Signal	Video Sweep (Y/C Separator)

1. Set the sweep generator output as shown in Fig. 16 supply the signal to the video in (Y/C Separator) and record the signal for a few minutes (Hi8).
2. Playback the just recorded portion.
3. Adjust VR 3016 so that the waveform becomes as shown in Fig. 17.

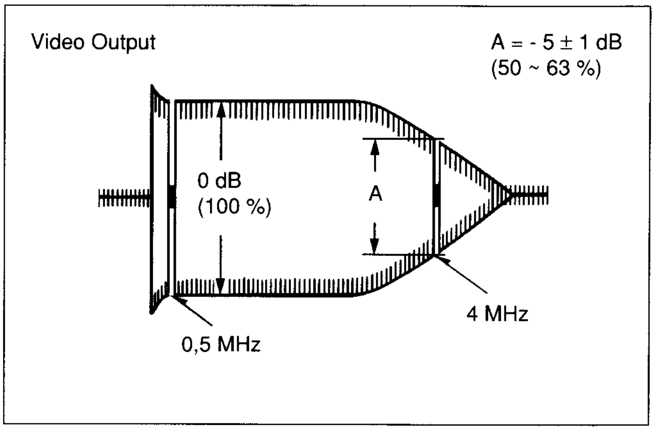


Fig. 17

4.17 4.43 MHz Adjustment

Cassette	Video 8 Cassette
Mode	Playback (Blank cassette)
Testpoint	TP 8003
Adjuster	VC 8001
Specification	4.433619 MHz ± 50 Hz
M.EQ.	Frequency counter

1. Playback the blank cassette.
2. Connect the frequency counter to TP 8003.
3. Adjust VC 8001 so that frequency is 4.433619 MHz ± 50 Hz.

4.18 VCO Adjustment

Cassette	Video 8 Cassette
Mode	Stop
Testpoint	TP 8002
Adjuster	VR 8002
Specification	5.859 ± 0,01 MHz
M.EQ.	Frequency counter

1. Set the unit into stop mode.
2. Connect the frequency counter to TP 8002.
3. Slowly turn VR 8002 from the right to left direction until the frequency is 5.859 ± 0,01 MHz.

Audio Section

4.19 FM Audio VCO Adjustment

Mode	Stop
Testpoint	TP 4002
Adjuster	VR 4001
Specification	1.5 MHz ± 5 kHz
M.EQ.	Frequency counter
Signal	No input

1. Do not supply any video and audio signal (VTR mode).
2. Connect the frequency counter to TP 4002.
3. Adjust VR 4001 so that the frequency is 1.5 MHz ± 5 kHz.

4.20 Hubeinstellung für FM-Audio

Betriebsart	Stop
Meßpunkt	TP 4002
Einsteller	VR 4003
Spezifikation	siehe Fig. 19 / 19a
Meßgeräte	Tongenerator, Oszilloskop
Signal	400 Hz, 0 dBV

1. Kein Videosignal und kein Audiosignal einspeisen (Rekorderbetrieb).
2. Den Oszilloskop an TP 4002 anschließen.
3. Das Oszilloskop so einstellen, daß 15 Schwingungen in 10 µsec abgebildet werden (entspricht 1,5 MHz).

4.20 FM Audio Deviation Adjustment

Mode	Stop
Testpoint	TP 4002
Adjuster	VR 4003
Specification	see Fig. 19 / 19a
M.EQ.	Signal generator, Oscilloscope
Signal	400 Hz, 0 dBV

1. Do not supply any video and audio signal (VTR mode).
2. Connect the oscilloscope to TP 4002.
3. Comfirm that 15 cycles appear in 10 µseconds (it means 1.5 MHz).

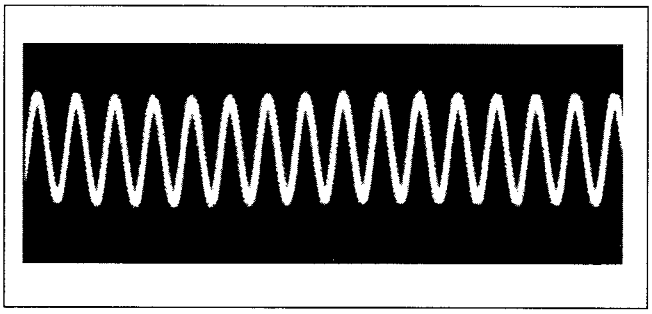


Fig. 18

4. Nun ein Signal 400 Hz, - 60 dBV (1 mV$_{eff}$) in die Mikrofonbuchse einspeisen.
5. VR 4003 so einstellen, daß die Schwingungen bei 7,1 µsec zur Deckung kommen.

4. Supply a 400 Hz, - 60 dBV (1 mV$_{rms}$) sinewave to Mic input.
5. Adjust VR 4003 so that the most single line crosses the 0 grid at 7.1 µsec.

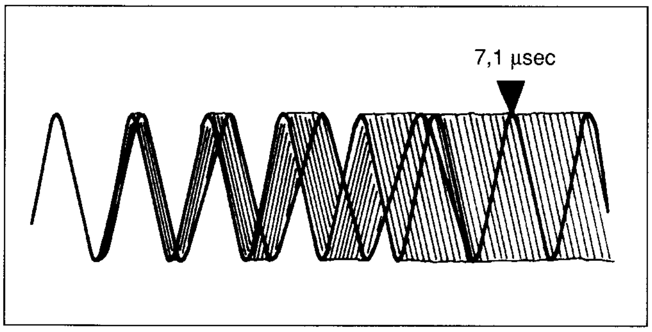


Fig. 19

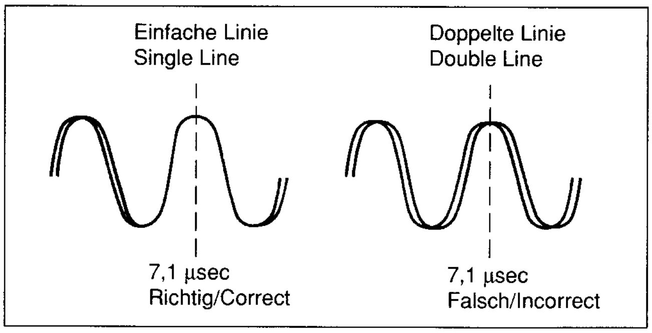


Fig. 19a

4.21 Einstellung des FM-Audio-Wiedergabepegels

Kassette	Hi8-Kassette
Betriebsart	Eigenaufnahme
Meßpunkt	Audio-Ausgang
Einsteller	VR 4002
Spezifikation	Wiederg.-Pegel - EE-Pegel ± 0,5 dBV
Meßgerät	Tongenerator, Millivoltmeter
Signal	1 kHz, - 60 dBV (1 mV$_{eff}$), MIC-Buchse

1. Ein Sinussignal 1 kHz, - 60 dBV (1 mV$_{eff}$) in den Mikrofoneingang (MIC) einspeisen.
2. Eine FM-Aufnahme durchführen und dabei den Ausgangspegel (EE-Pegel) messen (FM AUDIO).
3. Die gerade gemachte Aufnahme wiedergeben (FM-Tonspur).
4. Mit VR 4002 den Wiedergabepegel auf EE - Pegel ± 0,5 dBV = ± 20 mV$_{eff}$ einstellen
   (- 8 dBV ± 2 dBV = 320 ~ 500 mV$_{eff}$).

4.21 FM Audio Playback Level Adjustment

Cassette	Hi8 Cassette
Mode	Self recording
Testpoint	Audio Output
Adjuster	VR 4002
Specification	PB legel - EE legel ± 0,5 dBV
M.EQ.	Signal generator, Millivoltmeter
Signal	1 kHz, - 60 dBV (1 mV$_{rms}$), MIC-Buchse

1. Supply a 1 kHz, - 60 dBV (1 mV$_{rms}$) sinewave to Mic input.
2. Carry out a FM recording and at the same time measure the EE output level (FM AUDIO).
3. Playback the just recorded portion (FM Track).
4. Adjust VR 4002 so that the level of the playback becomes EE level ± 0.5 dBV = ± 20 mV$_{rms}$
   (- 8 dBV ± 2 dBV = 320 ~ 500 mV$_{rms}$).

4.22 Einstellung des PCM-Aufnahmestromes

Kassette	Hi8-Kassette
Betriebsart	Aufnahme
Meßpunkt	TP 4502
Einsteller	VR 4501
Spezifikation	170 ± 20 mV$_{ss}$
Meßgerät	Oszilloskop

1. Das Oszilloskop an TP 4502 anschließen.
2. Mit VR 4501 einen Pegel von 170 ± 20 mV$_{ss}$ einstellen.

4.22 PCM Rec. Current Adjustment

Cassette	Hi8 Cassette
Mode	Recording
Testpoint	TP 4502
Adjuster	VR 4501
Specification	170 ± 20 mV$_{p-p}$
M.EQ.	Oscilloscope

1. Connect the oscilloscope to TP 4502.
2. Adjust VR 4501 so that the level is 170 ± 20 mV$_{ss}$.

4.23 Einstellung der PCM-Aufnahmepegel

Kassette	Hi8-Kassette
Betriebsart	Aufnahme
Meßpunkt	TP 4509 (R), TP 4510 (L)
Einsteller	VR 4505 (R), VR 4506 (L)
Spezifikation	- 9,5 ± 1 dBV (300 - 380 mV_{eff})
Meßgerät	Tongenerator, Millivoltmeter
Signal	1 kHz

1. Ein Sinussignal 1 kHz, - 60 dBV (1 mV_{eff}) in den Mikrofoneingang (MIC) einspeisen.
2. Das Millivoltmeter an TP 4509 (R), TP 4510 (L) anschließen.
3. Mit VR 4509 (R) und VR 4506 (L) einen Wiedergabepegel von - 9,5 ± 1 dBV (300 - 380 mV_{eff}) einstellen.

4.24 Einstellung der Schaltschwelle

Betriebsart	Stop
Meßpunkt	TP 4504
Einsteller	VR 4502
Spezifikation	A = 50 ± 3%
Meßgerät	Videowobbler, Oszilloskop
Signal	5,79 MHz, 500 mV_{ss}

1. Ein Sinussignal 5,79 MHz, 500 mV_{ss} vom Videowobbler über einen Elko 10 µF an TP 4506 anlegen (Fig. 20).
2. Das Oszilloskop an TP 4504 anschließen.
3. Mit VR 4502 den Abstand „A“ auf 50% ± 3% einstellen.

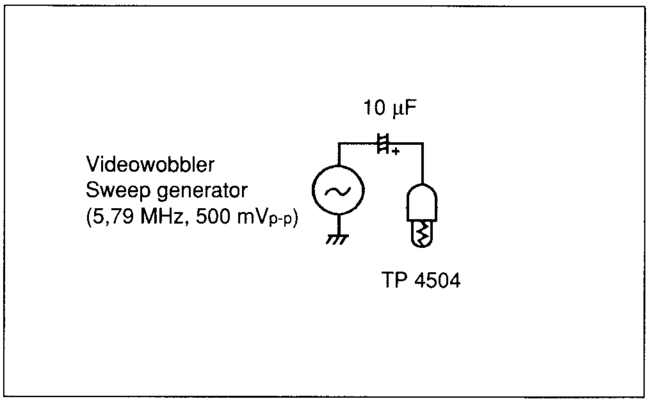


Fig. 20

4.23 PCM Audio Rec. Levels Adjustment

Cassette	Hi8 Cassette
Mode	Recording
Testpoint	TP 4509 (R), TP 4510 (L)
Adjuster	VR 4505 (R), VR 4506 (L)
Specification	- 9.5 ± 1 dBV (300 - 380 mV_{rms})
M.EQ.	Signal generator, Millivoltmeter
Signal	1 kHz

1. Supply a 1 kHz, - 60 dBV (1mV_{rms}) sinewave to Mic input.
2. Connect the millivoltmeter to TP 4509 (R), TP 4510 (L).
3. Adjust VR 4505 (R) and VR 4506 (L) so that the playback level is - 9.5 ± 1 dBV (300 - 380 mV_{rms}).

4.24 Slicer Level Adjustment

Mode	Stop
Testpoint	TP 4504
Adjuster	VR 4502
Specification	A = 50 ± 3%
M.EQ.	Video Sweep, Oscilloscope
Signal	5.79 MHz, 500 $\text{mV}_{\text{p-p}}$

1. Supply a 5.79 MHz, 500 $\text{mV}_{\text{p-p}}$ to TP 4506 throw capacitor 10 µF as shown in Fig. 20.
2. Connect the oscilloscope to TP 4504.
3. Adjust VR 4502 so that the “A” is 50% ± 3%.

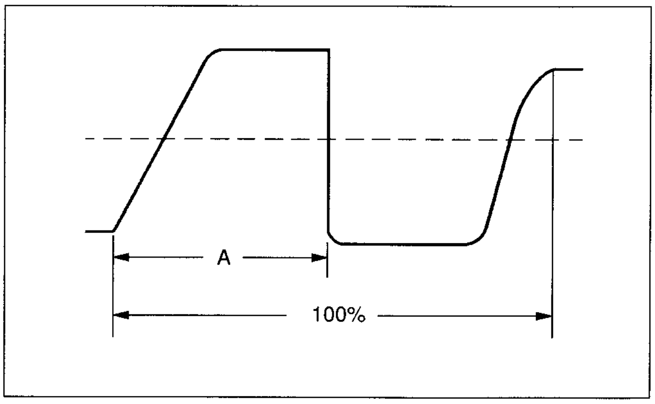


Fig. 21

4.25 Einstellung der PLL-Wiedergabe-Symmetrie

Betriebsart	Stop
Meßpunkt	TP 4505
Einsteller	VC 4502
Spezifikation	A = 50 ± 5%
Meßgerät	Oszilloskop
Signal	5,79 MHz, 500 mV_{ss}

1. Ein Sinussignal 5,79 MHz, 500 mV_{ss} vom Videowobbler über einen Elko 10 µF an TP 4506 anlegen (Fig. 20).
2. Das Oszilloskop an TP 4505 anschließen.
3. Mit VC 4502 den Abstand „A“ auf 50% ± 5% einstellen.

4.25 Pb PLL Center Adjustment

Mode	Stop
Testpoint	TP 4505
Adjuster	VC 4502
Specification	A = 50 ± 5%
M.EQ.	Oscilloscope
Signal	5.79 MHz, 500 $\text{mV}_{\text{p-p}}$

1. Supply a 5.79 MHz, 500 $\text{mV}_{\text{p-p}}$ to TP 4506 throw capacitor 10 µF as shown in Fig. 20.
2. Connect the oscilloscope to TP 4505.
3. Adjust VC 4502 so that the “A” is 50% ± 5%.

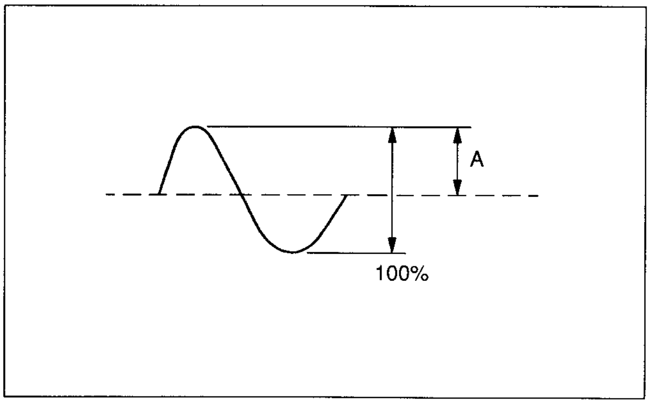


Fig. 22

4.26 Einstellung der Aufnahme-Taktfrequenz

Kassette	Hi8-Kassette
Betriebsart	Aufnahme
Meßpunkt	TP 4507
Einsteller	VC 4501
Spezifikation	A = 50 ± 5%
Meßgerät	Oszilloskop

1. Das Gerät auf Aufnahme schalten (ohne Signal).
2. Das Oszilloskop an TP 4507 anschließen.
3. Mit VC 4501 den Abstand „A“ auf 50% ± 5% einstellen.

4.26 Rec. Master Clock Adjustment

Cassette	Hi8-Cassette
Mode	Recording
Testpoint	TP 4507
Adjuster	VC 4501
Specification	A = 50 ± 5%
M.EQ.	Oscilloscope

1. Set the unit into recording mode (without signal).
2. Connect the oscilloscope to TP 4507.
3. Adjust VC 4501 so that the “A” is 50% ± 5%.

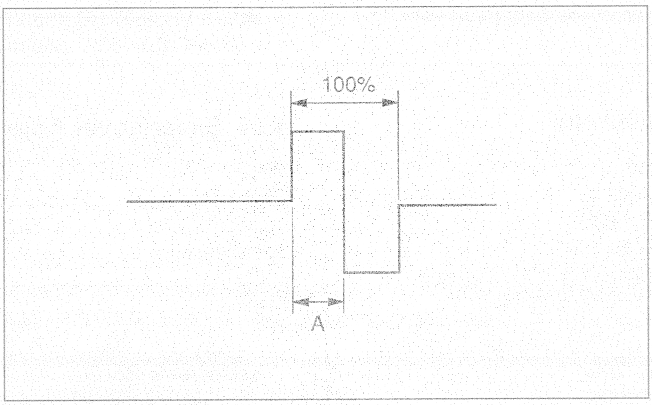


Fig. 23

4.27 Einstellung des PCM-Wiedergabepegels

Kassette	Hi8-Kassette
Betriebsart	Eigenaufnahme
Meßpunkt	Audio-Ausgang (L) und (R)
Einsteller	R = VR 4503, L = VR 4504
Spezifikation	Wiederg.-pegel = EE-Pegel ± 0,5 dBV
Meßgerät	Sinusgenerator, Millivoltmeter
Signal	1 kHz, - 60 dBV (1 mVeff)

1. Ein Sinussignal 1 kHz, - 60 dBV (1 mVeff) in den Mikrofoneingang (MIC) einspeisen.
2. Eine PCM-Aufnahme durchführen und dabei die Ausgangspegel (EE-Pegel) messen (DIGITAL AUDIO).
3. Die gerade gemachte Aufnahme wiedergeben (PCM-Tonspuren).
4. Mit VR 4503 (R) und VR 4504 (L) die Wiedergabepegel auf EE - Pegel ± 0,5 dBV = ± 20 mVeff einstellen
   (- 8 dBV ± 2 dBV = 320 ~ 500 mVeff).

4.27 PCM Audio Playback Level Adjustment

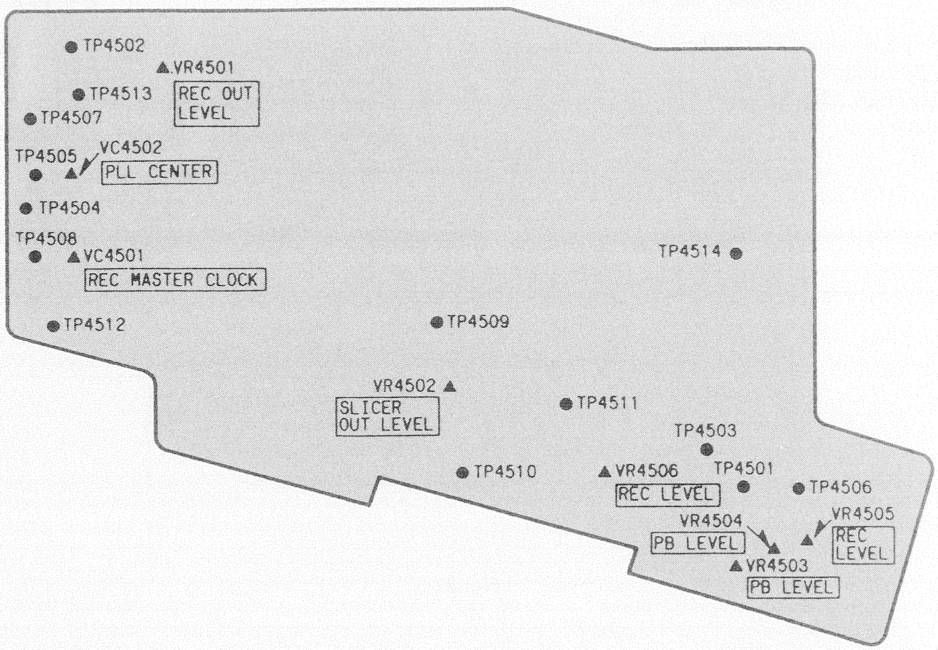
Cassette	Hi8 Cassette
Mode	Self recording
Testpoints	Audio Output (L) and (R)
Adjuster	R = VR 4503, L = VR 4504
Specification	PB legel - EE legel ± 0,5 dBV
M.EQ.	Signal generator, Millivoltmeter
Signal	1 kHz, - 60 dBV (1 mVrms),

1. Supply a 1 kHz, - 60 dBV (1 mVrms) sinewave to Mic input.
2. Carry out a PCM recording and at the same time measure the EE output level (DIGITAL AUDIO).
3. Playback the just recorded portion (PCM Tracks).
4. Adjust VR 4503 (R) and VR 4504 (L) so that the levels of the playback becomes EE level ± 0.5 dBV = ± 20 mVrms
   (- 8 dBV ± 2 dBV = 320 ~ 500 mVrms).

Lage der Meßpunkte und Einsteller (Rekorderteil)

Location of Test Points and Controls (Recorder Section)

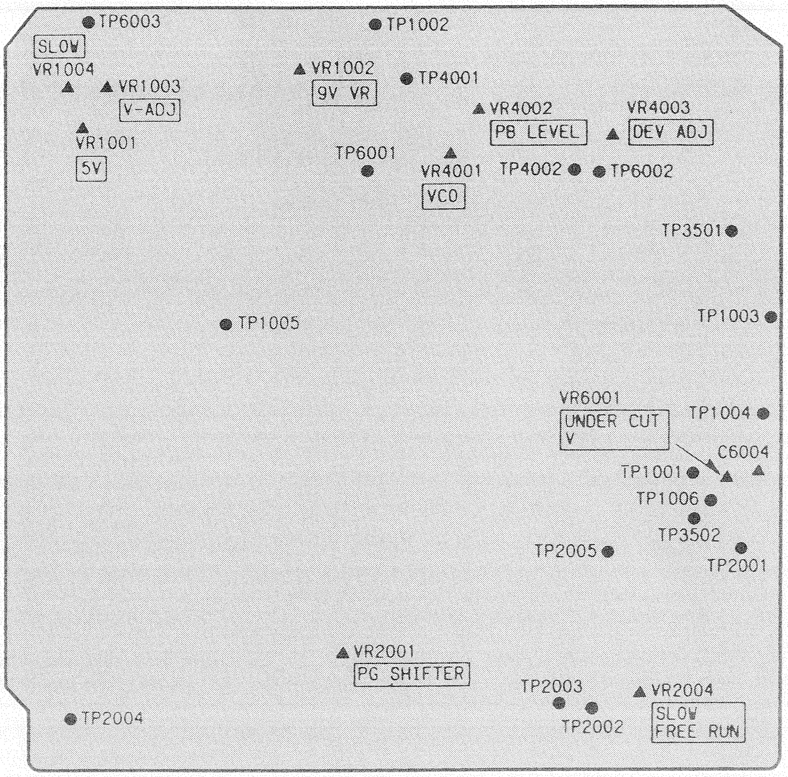
PCM-Platine
PCM C.B.A.


TP4502
VR4501
TP4513
REC OUT LEVEL
TP4507
TP4505
VC4502
PLL CENTER
TP4504
TP4508
VC4501
REC MASTER CLOCK
TP4514
TP4512
TP4509
VR4502
SLICER OUT LEVEL
TP4511
TP4503
TP4510
VR4506
REC LEVEL
TP4501
TP4506
VR4504
PB LEVEL
VR4505
REC LEVEL
VR4503
PB LEVEL

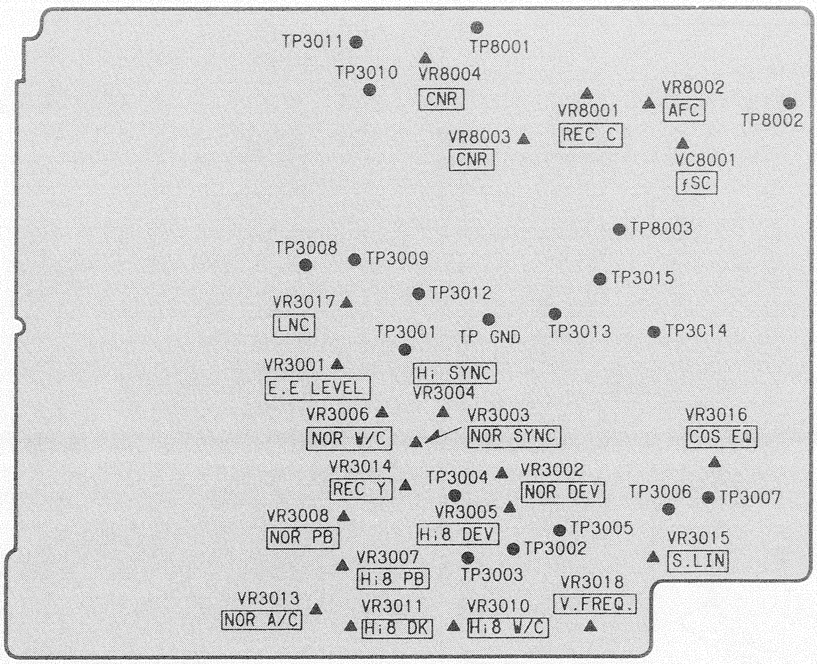
Lage der Meßpunkte und Einsteller (Rekorderteil)

Location of Test Points and Controls (Recorder Section)

Hauptplatine
Main C.B.A.


TP6003
SLOW
VR1004
VR1003
V-ADJ
VR1001
5V
TP1002
VR1002
9V VR
TP4001
VR4002
PB LEVEL
VR4003
DEV ADJ
TP6001
VR4001
VCO
TP4002
TP6002
TP3501
TP1005
TP1003
VR6001
UNDER CUT V
TP1004
C6004
TP1001
TP1006
TP3502
TP2005
TP2001
VR2001
PG SHIFTER
TP2003
VR2004
TP2002
SLOW FREE RUN
TP2004

Luminanz-und Farbteilplatine
Luminance and Chrominance C.B.A.


TP3011
TP8001
TP3010
VR8004
CNR
VR8002
VR8001
AFC
TP8002
VR8003
CNR
REC C
VC8001
fSC
TP8003
TP3008
TP3009
TP3015
VR3017
TP3012
LNC
TP3001
TP GND
TP3013
TP3014
VR3001
E.E LEVEL
Hi SYNC
VR3004
VR3006
VR3003
VR3016
NOR W/C
NOR SYNC
COS EQ
VR3014
TP3004
VR3002
REC Y
NOR DEV
TP3006
TP3007
VR3008
VR3005
TP3005
NOR PB
Hi8 DEV
TP3002
VR3015
VR3007
TP3003
S.LIN
Hi8 PB
VR3018
VR3013
VR3011
VR3010
V.FREQ.
NOR A/C
Hi8 DK
Hi8 W/C

5. Austauscharbeiten (Kamerateil)

Demontage des Kamerateiles

Hinweis:

- Um eine Beschädigung der Teile während der Instandsetzung zu vermeiden, ein Tuch oder ein anderes weiches Material unter die Leiterplatinen oder das Gerät legen.

5.1 Abnehmen der Kameraplatinen

1. Die Gehäuseteile abnehmen, wie im Abschnitt „Servicevorbereitungen" beschrieben.

5. Replacement Procedures (Camera Section)

Disassembly of Camera Section

Note:

- Place the cloth or any other soft material under the P.C. Boards or unit for preventing them from being damaged while servicing.

5.1 Removal of Camera C.B.A.'s

1. Take off the casing parts as described in section "Service Preparations".

Teil Part	Fig. Fig.	Entfernen, entriegeln, abziehen Remove, unlock, disconnect	Bemerkung Remark
Abschirmung Shield case	1 1	2 Schrauben (A) 2 Screws (A)	
Prozeßplatine Process C.B.A.	2 2	2 Schrauben (B) 2 Screws (B)	Stecker und Masseleitung lösen Remove the connector and the ground lead
CCD-Sensorplatine CCD Sensor C.B.A.	3, 4 3, 4	2 Schrauben (C), 2 Schrauben (D) 2 Screws (C), 2 Screw (D)	Steckerverbindung lösen Disconnect the connector
Autofokus-Platine Auto Focus C.B.A.	5 5	2 Schrauben (E) 2 Screws (E)	Steckerverbindungen lösen Disconnect the connectors
CCD-Einheit CCD Unit	6-8 6-8	3 Schrauben (F), 3 Schrauben (G), 2 Schrauben (H) 3 Screws (F), 3 Screws (G), 2 Screws (H)	Hinweise auf Seite 1-35 beachten See notes on page 1-35
Piezo-Einheit Actuator Unit	10 10	3 Schrauben (I) 3 Screws (I)	Fokus-Abgleich überprüfen (Seite 1-49) Confirm the focus adjustment (page 1-49)

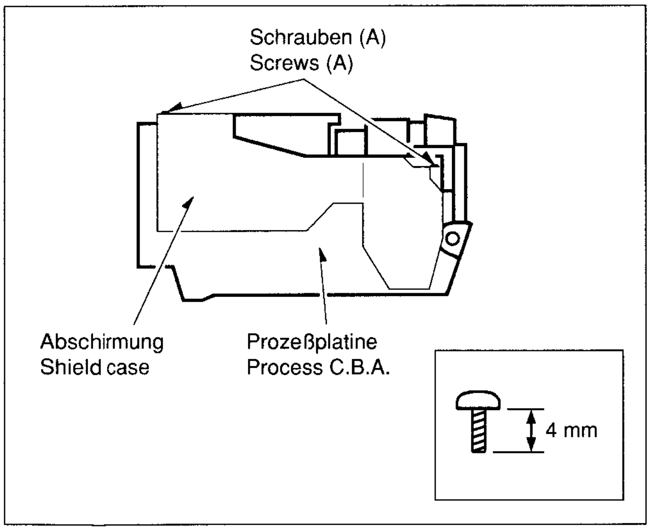

Schrauben (A)
Screws (A)
Abschirmung
Shield case
Prozeßplatine
Process C.B.A.
4 mm

Fig. 1

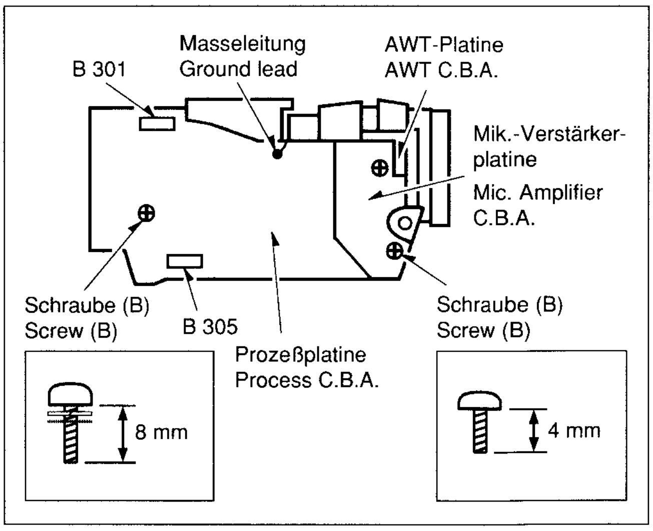

B 301
Masseleitung
Ground lead
AWT-Platine
AWT C.B.A.
Mik.-Verstärker-platine
Mic. Amplifier C.B.A.
Schraube (B)
Screw (B)
B 305
Prozeßplatine
Process C.B.A.
Schraube (B)
Screw (B)
8 mm
4 mm

Fig. 2

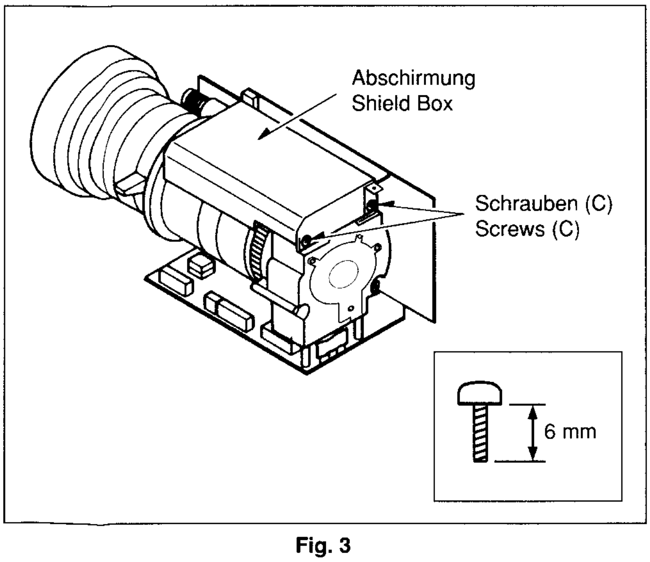

Abschirmung
Shield Box
Schrauben (C)
Screws (C)
6 mm

Fig. 3

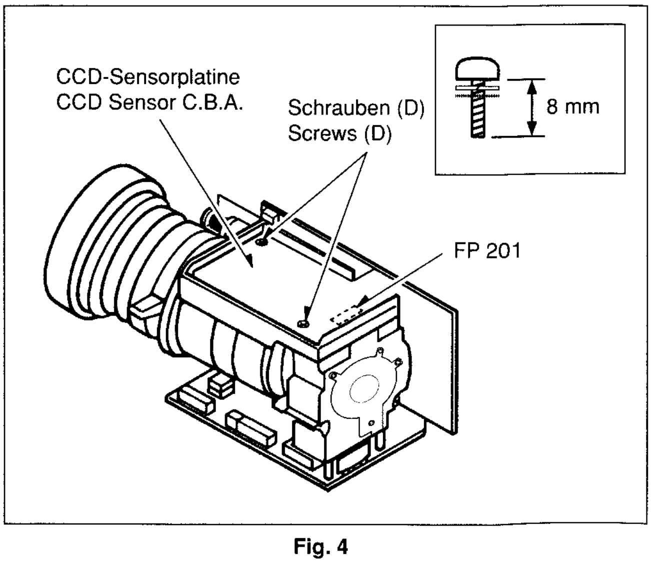

CCD-Sensorplatine
CCD Sensor C.B.A.
Schrauben (D)
Screws (D)
8 mm
FP 201

Fig. 4

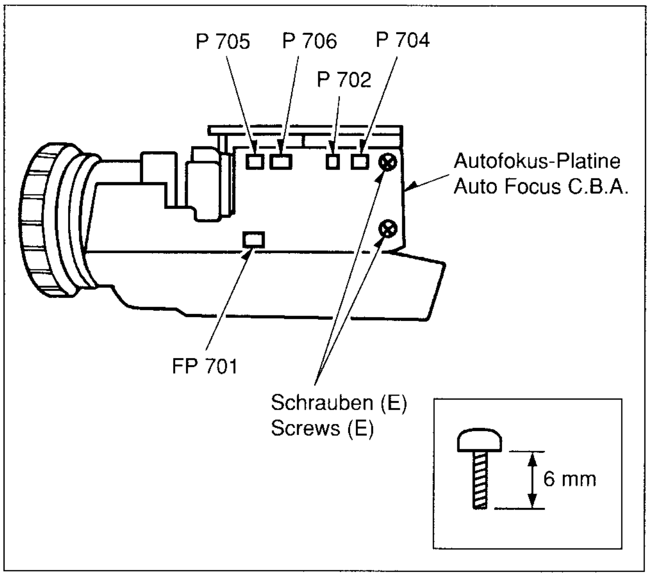

P 705
P 706
P 704
P 702
Autofokus-Platine
Auto Focus C.B.A.
FP 701
Schrauben (E)
Screws (E)
6 mm

Fig. 5

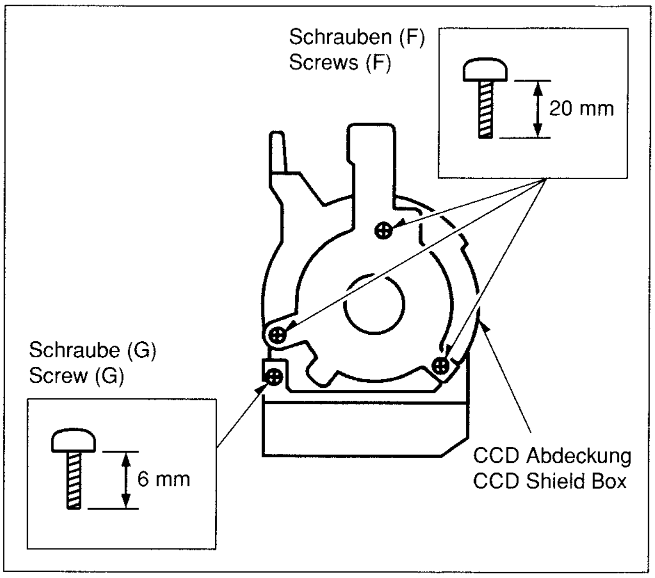

Schrauben (F)
Screws (F)
20 mm
Schraube (G)
Screw (G)
6 mm
CCD Abdeckung
CCD Shield Box

Fig. 6

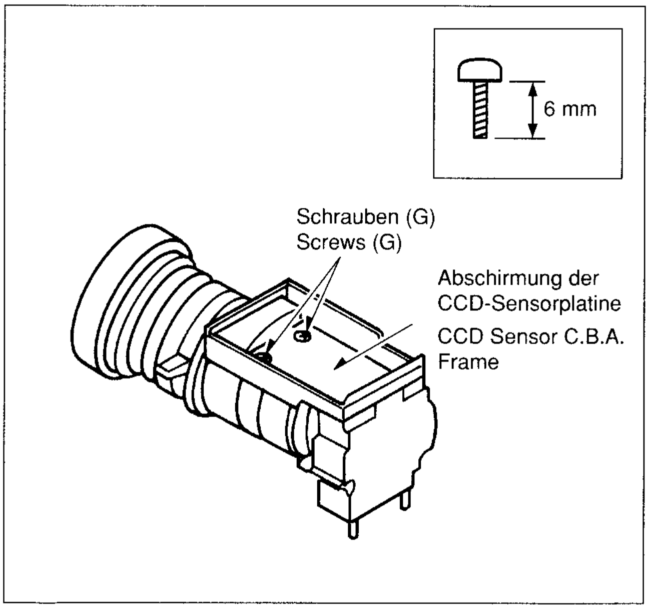

6 mm
Schrauben (G)
Screws (G)
Abschirmung der
CCD-Sensorplatine
CCD Sensor C.B.A.
Frame

Fig. 7

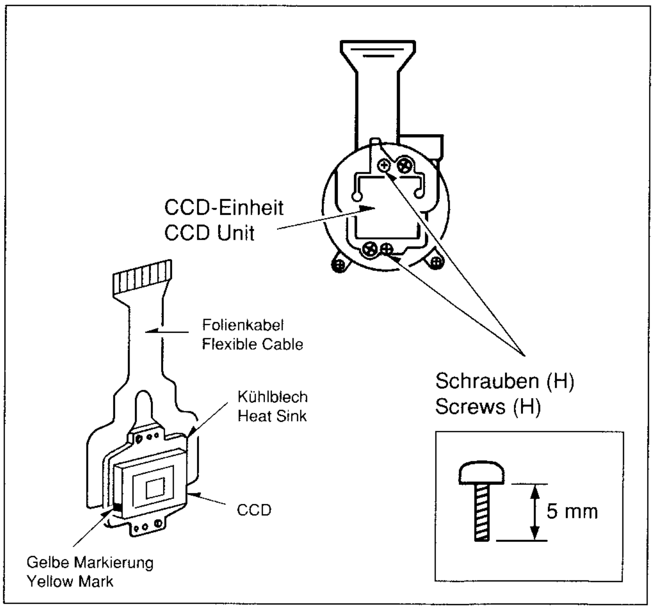

CCD-Einheit
CCD Unit
Folienkabel
Flexible Cable
Kühlblech
Heat Sink
CCD
Gelbe Markierung
Yellow Mark
Schrauben (H)
Screws (H)
5 mm

Fig. 8

Hinweise:

- Nicht die Oberfläche der CCD-Einheit mit den Fingern oder irgendwelchen Gegenständen berühren.
- Nach dem Auswechseln der CCD-Einheit den gesamten Abgleich des Kamerateiles überprüfen.
- Beim Auswechseln des CCD-Chips auf die gelbe Markierung achten (Fig. 8).
- Vor dem Zusammenbau sind die optischen Teile, speziell der Filtereinsatz, zu säubern. Wurde das Filter gewechselt, ist bei der Montage darauf zu achten, daß der bläuliche Teil (IR-Filter) zur CCD-Einheit zeigt. Sicherstellen, daß der Dichtungsring eingesetzt wird (Fig. 9).

Notes:

- Do not touch the surface of CCD unit.
- Confirm the whole adjustment procedures for camera section after replacing this CCD unit.
- When replacing the CCD chip pay attention to the yellow marking (Fig. 8).
- Before reinstalling, clean the IR cut filter with lens cleaning materials. If the crystal filter plate is removed from the front of the CCD assembly, replace it with the IR cut section (blue portion) positioned toward the CCD unit.
  Ensure that the filter rubber is mounted (Fig. 9).

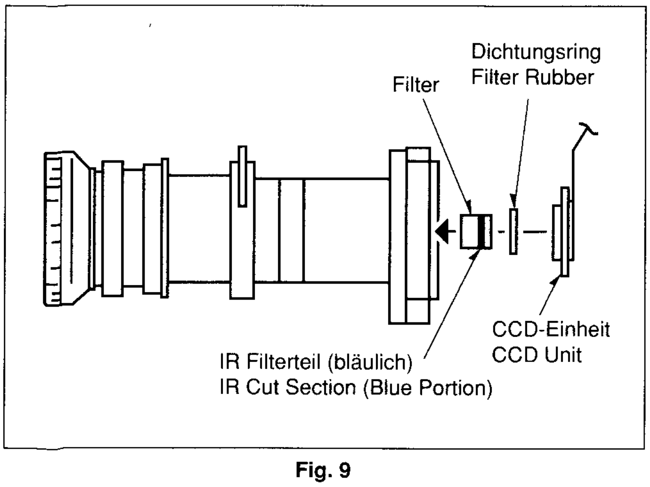

Dichtungsring
Filter Rubber
Filter
CCD-Einheit
CCD Unit
IR Filterteil (bläulich)
IR Cut Section (Blue Portion)

Fig. 9

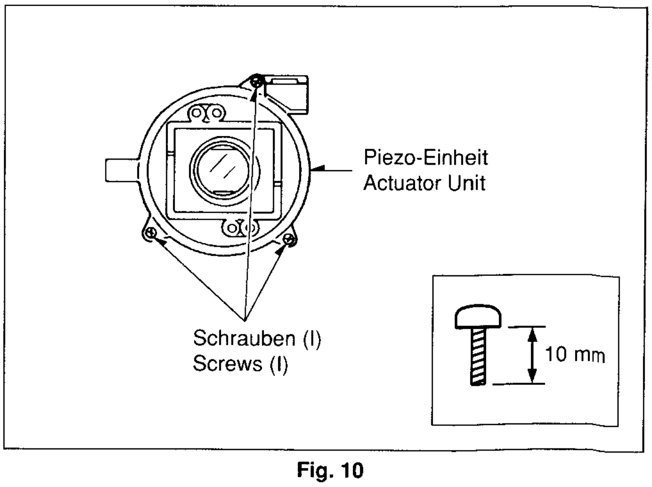

Piezo-Einheit
Actuator Unit
Schrauben (I)
Screws (I)
10 mm

Fig. 10

5.2 Reparaturen am Autofokus-Objektiv

1. Zuerst die Platinen und das Gehäuseteil von der Optik entfernen.
2. Die Schraube (A) entfernen und den Zoommotor abnehmen.
3. Die Schraube (B) entfernen und den Fokusmotor abnehmen.
4. Die Schraube (C) entfernen und den Fokusantrieb abnehmen.
5. Die Schraube (D) entfernen und die Positions-Sensorplatine Fokus und Zoom abnehmen.
6. Die Schraube (E) herausdrehen und den kleinen Kamerawinkel abnehmen (Fig. 11).

5.2 Replacement of Focus Lens Unit

1. Remove the C.B.A's and lens cover from the lens unit.
2. Unscrew the screw (A) and remove the zoom motor.
3. Unscrew the screw (B) and remove the focus motor.
4. Unscrew the screw (C) and remove the focus drive unit.
5. Unscrew the screw (D) and remove the focus and zoom position detector C.B.A.
6. Unscrew the screw (E) and remove the lens angle (Fig. 11).

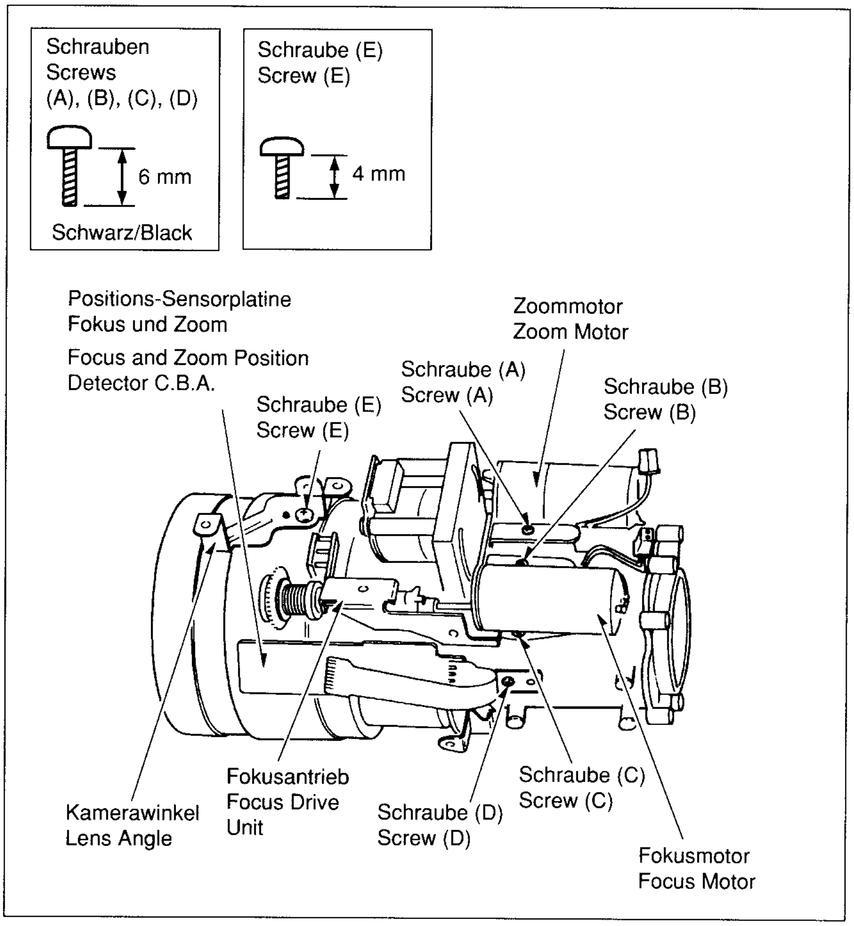

Schrauben
Screws
(A), (B), (C), (D)
6 mm
Schwarz/Black
Schraube (E)
Screw (E)
4 mm
Positions-Sensorplatine Fokus und Zoom
Focus and Zoom Position Detector C.B.A.
Zoommotor
Zoom Motor
Schraube (A)
Screw (A)
Schraube (B)
Screw (B)
Schraube (E)
Screw (E)
Fokusantrieb
Focus Drive Unit
Schraube (C)
Screw (C)
Kamerawinkel
Lens Angle
Schraube (D)
Screw (D)
Fokusmotor
Focus Motor

Fig. 11

7. Das Griffgummi und das darunterliegende Klebeband entfernen (Fig. 12).
8. Um den Fokusring abnehmen zu können, muß der Steg mit Kerbe im Innenteil in Pfeilrichtung (Fig. 12) geschoben werden.
9. Die 4 Schrauben (F) entfernen und den Optikteil mit Blendeneinheit abnehmen (Fig. 13).

7. Remove the focus fastener and adhesive tape (Fig. 12).
8. Remove the focus ring by turning the projection with groove counter clockwise (Fig. 12).
9. Unscrew the four screws (F) and remove the focus lens unit with iris unit (Fig. 13).

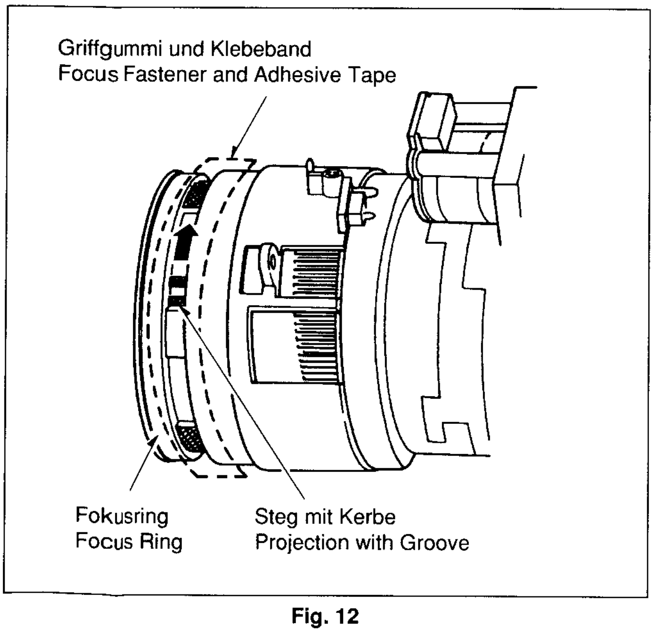

Griffgummi und Klebeband
Focus Fastener and Adhesive Tape
Fokusring
Focus Ring
Steg mit Kerbe
Projection with Groove

Fig. 12

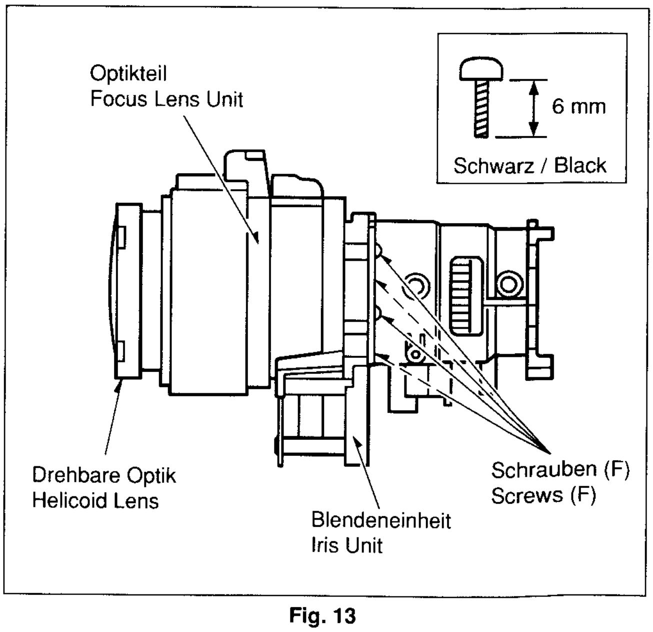

Optikteil
Focus Lens Unit
6 mm
Schwarz / Black
Drehbare Optik
Helicoid Lens
Blendeneinheit
Iris Unit
Schrauben (F)
Screws (F)

Fig. 13

10. Hinweise für den Zusammenbau

Wurde der vordere drehbare Optikteil herausgenommen, folgende Montageschritte durchführen:

a. Die drehbare Optik so ansetzen, daß deren Markierung mit der Markierung „A“ am Optikteil zur Deckung kommt (Fig. 14).
b. Nun die drehbare Optik einschrauben.
c. Die drehbare Optik zuerst bis zum Anschlag hereindrehen und anschließend um ca. 20 mm zurückdrehen (Fig. 15). Dieses erleichtert die nächsten Montageschritte.

10. Assembly instructions

If the helicoid lens is removed, the helicoid lens is installed as follows:

a. Install the helicoid lens so that the projection with groove on helicoid lens comes to the portion "A“ on lens unit as shown in Fig. 14.
b. Install the helicoid lens.
c. Turn the helicoid lens to fully clockwise and turn it back for approx. 20 mm (so that next installation become easy) as shown in Fig. 15.

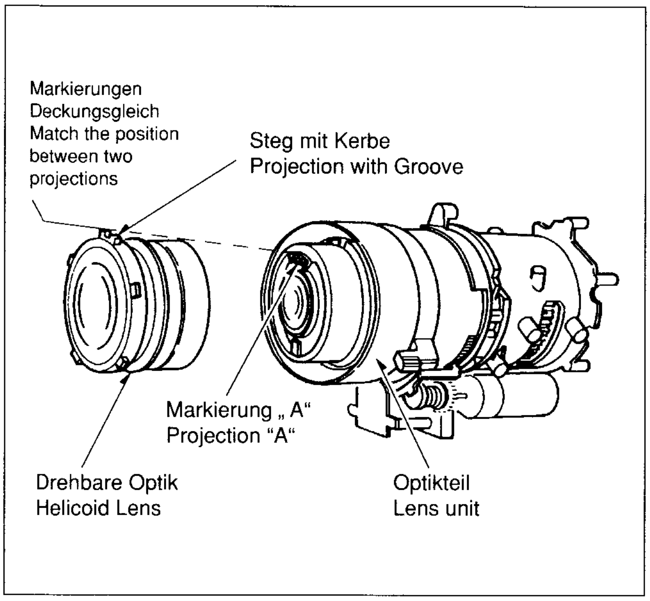

Markierungen
Deckungsgleich
Match the position
between two
projections
Steg mit Kerbe
Projection with Groove
Markierung „ A“
Projection "A“
Drehbare Optik
Helicoid Lens
Optikteil
Lens unit

Fig. 14

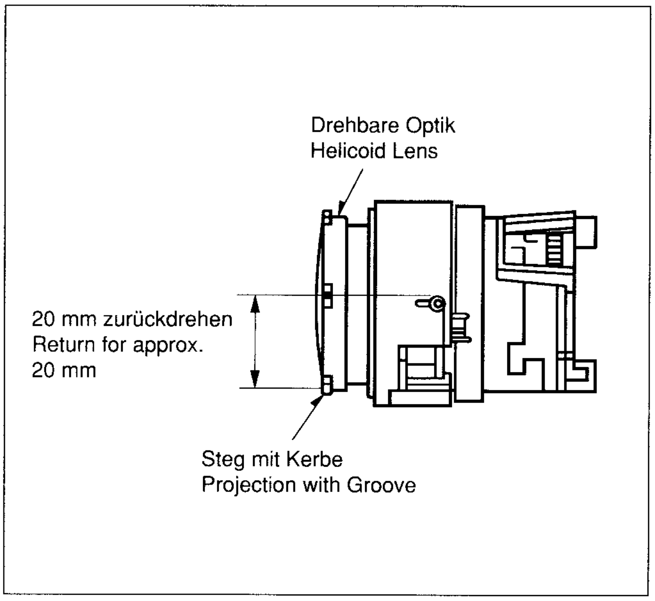

Drehbare Optik
Helicoid Lens
20 mm zurückdrehen
Return for approx.
20 mm
Steg mit Kerbe
Projection with Groove

Fig. 15

d. Den Fokusring so aufsetzen, daß die Markierung „B“ und der Steg mit Kerbe zur Deckung kommen Fig. 16. (Die ∞ Maske des Fokusringes zeigt auf die weiße Linie des Optikteiles.)
e. Den Steg im Innenteil nach rechts schieben (verriegeln) und das Klebeband, sowie das Griffgummi, aufsetzen (Fig. 17).
f. Die übrige Montage erfolgt in umgekehrter Reihenfolge der Demontage.

d. Install the focus ring so that the portion "B“ on focus ring comes to projection with groove on focus lens unit as shown in Fig 16. (Infinity ∞ mark on focus ring come to white-line on focus lens unit.)
e. In the inner part push the frame to the right (lock) and attach the adhesive tape and the focus fastener (Fig. 17).
f. For further assembly proceed in the reverse order as described for disassembly.

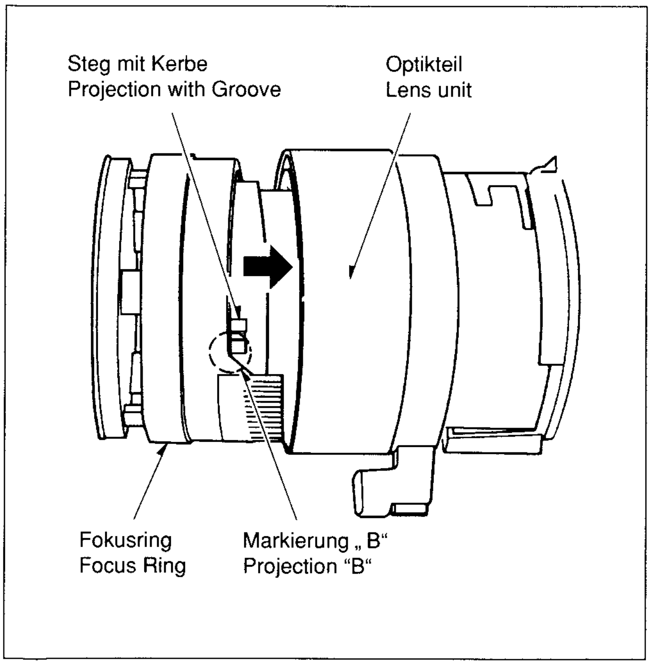

Steg mit Kerbe
Projection with Groove
Optikteil
Lens unit
Fokusring
Focus Ring
Markierung „ B“
Projection "B“

Fig. 16

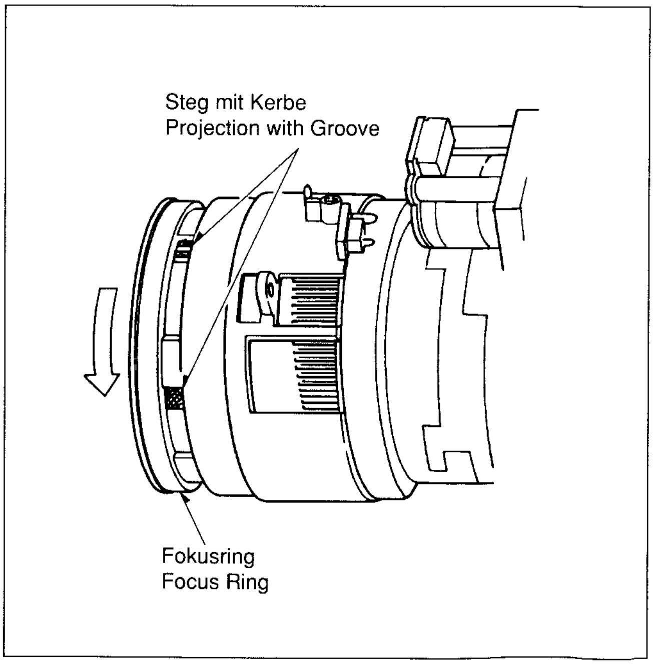

Steg mit Kerbe
Projection with Groove
Fokusring
Focus Ring

Fig. 17

Hinweis:
Nach diesen Arbeiten muß das Auflagemaß Seite 1 - 40 kontrolliert werden.

Note:
After these steps the back focus adjustment page 1 - 40 must be checked.

6. Elektrischer Abgleich (Kamerateil)

Meßgeräte und Werkzeuge

Die folgenden Meßgeräte sind für den Abgleich des Kamerateils notwendig:

- Oszilloskop
  (Zweistrahl mit 20 MHz-Bandbreite,
  2 Tastköpfe 10:1, 1 Tastkopf 1:1)
- Digitalvoltmeter (D.V.M)
- Frequenzzähler
- Vektorskop
- Farbmonitor (bei dem die Bildränder erkennbar sind)
- Stativ
- Halogenbeleuchtung 3200 K
- Luxmeter
- Testbild-Kreis (Im Anhang)
- Testbild-Auflösung (Im Anhang)
- Grau/Weiß-Testbild (Im Anhang)
- Schwarz/Weiß-Testbild (Im Anhang)
- Auflagemaß-Testbild (Im Anhang)

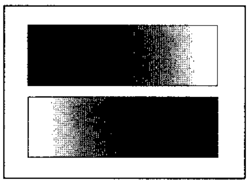
6. Electrical Adjustment Procedures (Camera Section)

Test Equipment and Tools

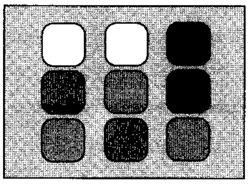
The following equipment is required for adjustment of the camera section:

- Oscilloscope
  (dual trace, 20 MHz bandwidth,
  with 2 probes 10:1, one 1:1)
- Digital voltmeter (D.V.M)
- Frequency counter
- Vectorscope
- Color video monitor (capable of underscan)
- Tripod
- Lighting 3200 K
- Lightmeter
- Ball chart (In the enclosure)
- Resolution chart (In the enclosure)
- Gray/White chart (In the enclosure)
- Black/White chart (In the enclosure)
- Hunting chart (In the enclosure)

- Testbild Log. Grauskala
- Logarithmic gray scale chart



- Farbtestbild
- Color chart



Die Testbilder sind mit 1400 Lux zu beleuchten (3200 K). Sie erreichen 1400 Lux, wenn eine Videoleuchte 1000 W (z.B. VL 1000) aus 2,7 m Entfernung auf das Testbild strahlt.
Fremdlicht ist abzuschirmen.

The test pictures have to be illuminated with 1400 lux (3200 K). 1400 lux can be achieved by installing a video lamp, 1000 W (for example VL 1000), at 2.7 m distance in front of the test picture.
Shield any external light.

Vorbereitungen

1. Den Kamerateil vom Rekorderteil lösen (siehe Servicevorbereitungen).
2. Den Kamerateil mit dem Kamerahalter und dem Kamera-Befestigungssatz auf einem Stativ befestigen (Fig. 1).
3. Den Kamerateil über die Kabel (Fig. 1a) mit dem Rekorder verbinden.

Hinweis:
Bevor das Folienkabel aus der Klemmfassung gezogen wird, muß diese entriegelt werden.

Preparations

1. Remove the camera part from VTR part (See service preparations).
2. Set the camera part on the tripod using the camera holder and the camera mounting kit (Fig. 1).
3. Connect the VTR part and camera part trough the cables, Fig. 1a.

Note:
Before pulling the flexible cable out of the clamping fixture this must be unlocked.

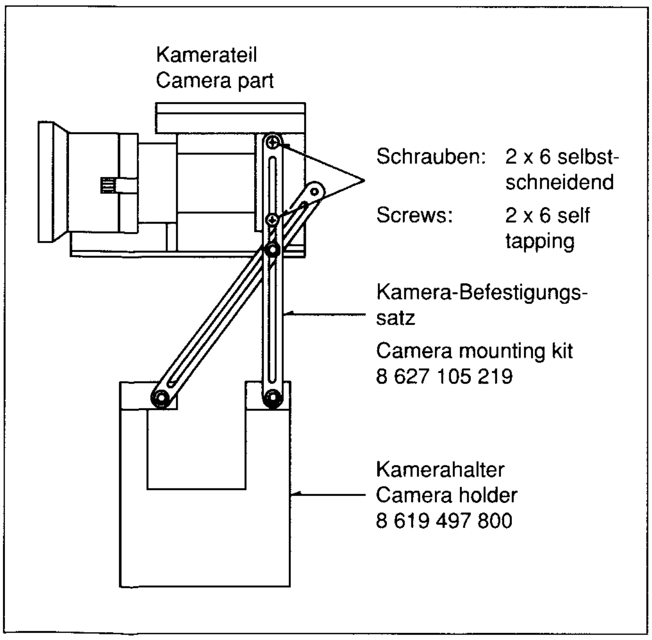


Fig. 1

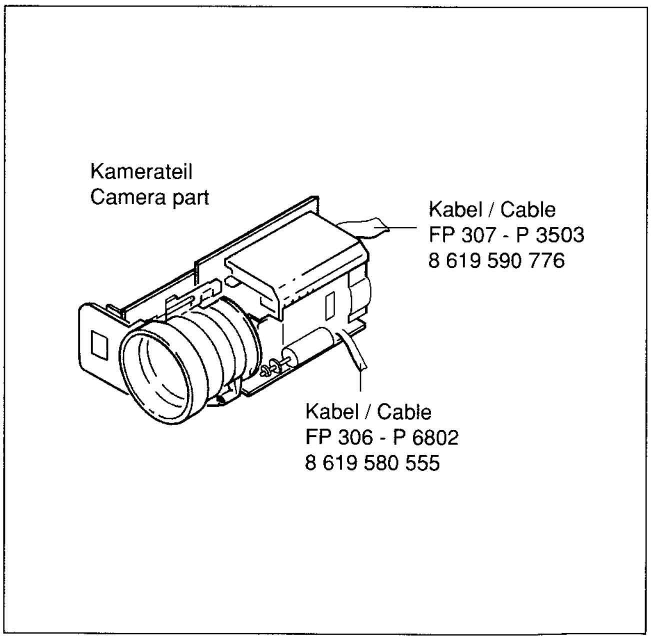


Fig. 1a

Stellung der Schalter an der Kamera

Die Schalter an der Kamera müssen für den Abgleich wie folgt geschaltet sein:

WHITE BALANCE .... „INDOOR"
FOCUS .... „MANUAL"
SHUTTER SPEED .... „OFF"
Regler IRIS .... „Mittelstellung"

Position of Switches on the Camera

Set the switches on the camera as follows:

WHITE BALANCE .... "INDOOR"
FOCUS .... "MANUAL"
SHUTTER SPEED .... "OFF"
IRIS VR .... "Centre"

Flußdiagramm zum Kameraabgleich

6.1 Einstellung des Auflagemaßes

CCD-Treiberteil

6.2 CCD-Voreinstellung
↓
6.3 Einstellung auf Übersteuerungs-Minimum
↓
6.4 Einstellung des CCD-Sensor-Ausganges

Prozeßteil

6.5 Einstellung des Schwarzwertes
↓
6.6 Einstellung des Blendenregler-Arbeitspunktes
↓
6.7 Einstellung des ALC
↓
6.8 YH-Verstärkungseinstellung
↓
6.9 Trägerfrequenz-Balance und Schwarzwert-Einstellung
↓
6.10 Einstellung der Weiß-Balance für Kunstlicht
↓
6.11 Begrenzungseinstellung
↓
6.12 Einstellung der Weiß-Balance für Außenlicht
↓
6.13 Einstellung der Burstphase
↓
6.14 Einstellung der Farbphase und -Verstärkung
↓
6.15 Einstellung des autom. Weißabgleichs
↓
6.16 Einstellung des Schwarzwerte (TELEPHOTO Betrieb)
↓
6.17 YH-Verstärkungseinstellung (TELEPHOTO Betrieb)
↓
6.18 Trägerfrequenz-Balance und Schwarzwert-Einst. (TELEPHOTO Betrieb)
↓
6.19 Begrenzungseinstellung (TELEPHOTO Betrieb)
↓
6.20 Pegeleinstellung für verz. Farbe 1H/2H/3H (TELEPHOTO Betrieb)

Autofokusteil

6.21 Einstellung des Autofokus-Rahmens
↓
6.22 Einstellung der Aktuatorspannung
↓
6.23 Einstellung der Autofokus-Verstärker
↓
6.24 Autofokus-Frequenzeinstellung

Camera Adjustment flow Chart

6.1 Back Focus Adjustment

CCD Drive Section

6.2 CCD Bias Adjustment
↓
6.3 V-Sub Voltage Adjustment
↓
6.4 CCD Output Adjustment

Process Section

6.5 Pedestal Level Adjustment
↓
6.6 Iris VR Adjustment
↓
6.7 ALC Adjustment
↓
6.8 YH Gain Adjustment
↓
6.9 Carrier Balance and Black Pedestal Adjustment
↓
6.10 Indoor White Balance Adjustment
↓
6.11 High Intensity Suppress (HC) Adjustment
↓
6.12 Outdoor White Balance Adjustment
↓
6.13 Burst Phase Adjustment
↓
6.14 Colour Phase and Gain Adjustment
↓
6.15 AWT Mode Adjustment
↓
6.16 Pedestal Level Adjustment (TELEPHOTO mode)
↓
6.17 YH Gain Adjustment (TELEPHOTO mode)
↓
6.18 Carrier Balance and Black Pedestal Adjustment (TELEPHOTO mode)
↓
6.19 High Intensity (HC) Adjustment (TELEPHOTO mode)
↓
6.20 Chroma 1H/2H/3H Delay Level Adjustment (TELEPHOTO mode)

Auto Focus Section

6.21 AF Gate Adjustment
↓
6.22 Bimolf Gain Control Adjustment
↓
6.23 Hall AMX Adjustment
↓
6.24 AF VH Frequency Adjustment

6.1 Einstellung des Auflagemaßes

Meßpunkt	Video-Ausgang
Einsteller	Einstellring
Blende	Geöffnet (wenig Licht)
Testbild	Auflagemaß Testbild
Meßgeräte	Monitor, Fernsehgerät
Spezifikation	Scharf über den gesamten Zoombereich

1. Die Kamera auf das Auflagemaß-Testbild richten. Der Abstand zum Testbild soll 3 m betragen (Objektiv in Stellung „Tele").
2. Das Testbild mit dem Objektiv scharfstellen (Fokusring steht auf 3 m).
3. Das Objektiv auf "WIDE" stellen und das Testbild mit dem "Einstellring" Fig. 2 scharf einstellen.
4. Das Testbild muß nun über den gesamten Zoombereich scharf sein. Ist das nicht der Fall, müssen die Abgleichschritte 1.-3. solange wiederholt werden, bis das Testbild über den gesamten Zoombereich scharf ist.

6.1 Back Focus Adjustment

Test Point	Video Output
Adjuster	Black Focus Pitch
Iris	open (low light)
Chart	Hunting Chart
M.EQ.	Monitor, TV
Specification	Sharpest focus is obtained

1. Aim the camera at the hunting chart in 3 m distance and zoom all the way in (Fully tele position).
2. Focus the lens on the object and confirm that focusring indicates 3 m.
3. Zoom all the way back and adjust the back focus pitch so that the sharpest focus is obtained.
4. Best focus must be obtained over the entire zoom range. If this isn't the case, repeat adjustment procedures 1.-3. until the best focus is obtained over the entire zoom range.

Hinweis:
Beim Abgleich darauf achten, daß die Umgebungshelligkeit möglichst gering ist, damit die Blende am Objektiv möglichst weit aufgesteuert wird (geringe Schärfentiefe).

Note:
During adjustment, make sure that ambient light is as low as possible, so that the lens is opened as far as possible (low depth of focus).

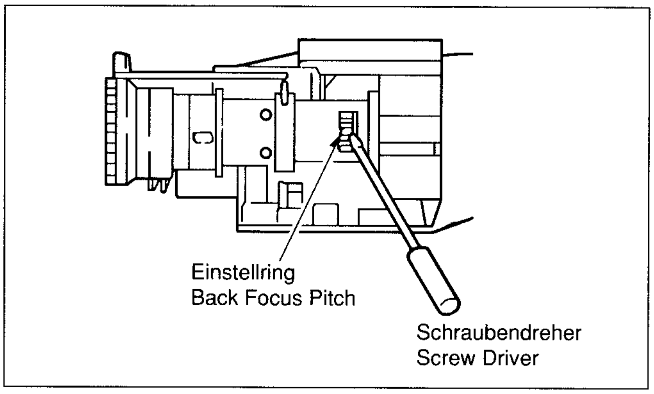
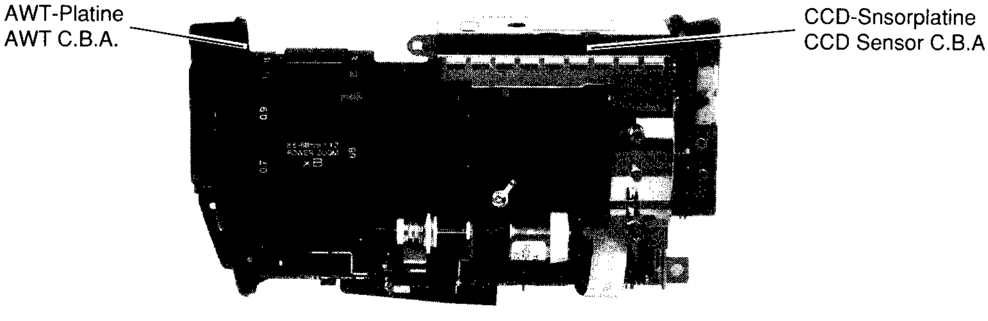


Fig. 2

CCD-Treiberteil

CCD Drive Section



6.2 CCD-Voreinstellung

Meßpunkt	TP 201
Einsteller	VR 203
Blende	Geschlossen
Meßgerät	Oszilloskop
Spezifikation	Maximum (Fig. 3)

1. Den Blendenregler IRIS auf CLOSE drehen.
2. Das Oszilloskop an TP 201 anschließen.
3. Mit VR 203 den Pegel „A" auf Maximum einstellen (Fig. 3).
4. Den Blendenregeler IRIS wieder in die Mittelstellung (Rastung) drehen.

6.2 CCD Bias Adjustment

Test Point	TP 201
Adjuster	VR 203
Iris	closed
M.EQ.	Oscilloscope
Specification	Maximum (Fig. 3)

1. Turn the IRIS volume to CLOSE side.
2. Connect the oscilloscope to TP 201.
3. Adjust the VR 203 so that level "A" is maximized (Fig. 3).
4. Turn the IRIS controle to the centre (click) position.

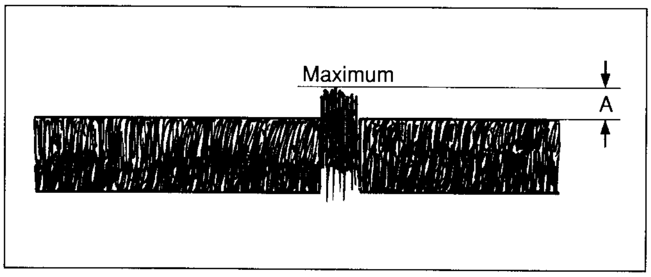


Fig. 3

6.3 Einstellung auf Übersteuerungs-Minimum

Meßpunkt	Video-Ausgang
Einsteller	VR 201
Blende	voll geöffnet
Testbild	Schwarz/Weiß-Testbild
Meßgerät	Monitor, Oszilloskop
Spezifikation	Kein Übersteuern

1. Die Kamera auf das Schwarz/Weiß-Testbild richten und scharf einstellen (min. 1400 Lux).
2. Den Blendenregler IRIS voll öffnen.
3. Mit dem Regler VR 201 den Pegel „A“ auf Minimum einstellen (Fig. 4).
   Auf dem Monitorbild dürfen keine Überstrahlungen oder Übersteuerungen auftreten.

6.3 V-Sub Voltage Adjustment

Test Point	Video Output
Adjuster	VR 201
Iris	fully open
Chart	Black/White Chart
M.EQ.	Monitor, Oscilloscope
Specification	No blooming

1. Aim the camera at black/white chart and focus the lens on the object (min. 1400 lux).
2. Turn IRIS volume to fully open.
3. Adjust the VR 201 so that the level "A" is minimized (Fig. 4).

   Confirm that the monitored picture does not contain the blooming.

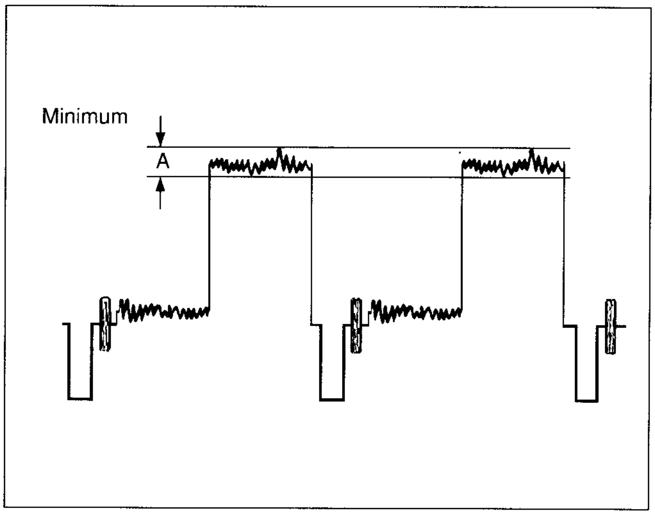


Fig. 4

6.4 Einstellung des CCD-Sensor-Ausganges

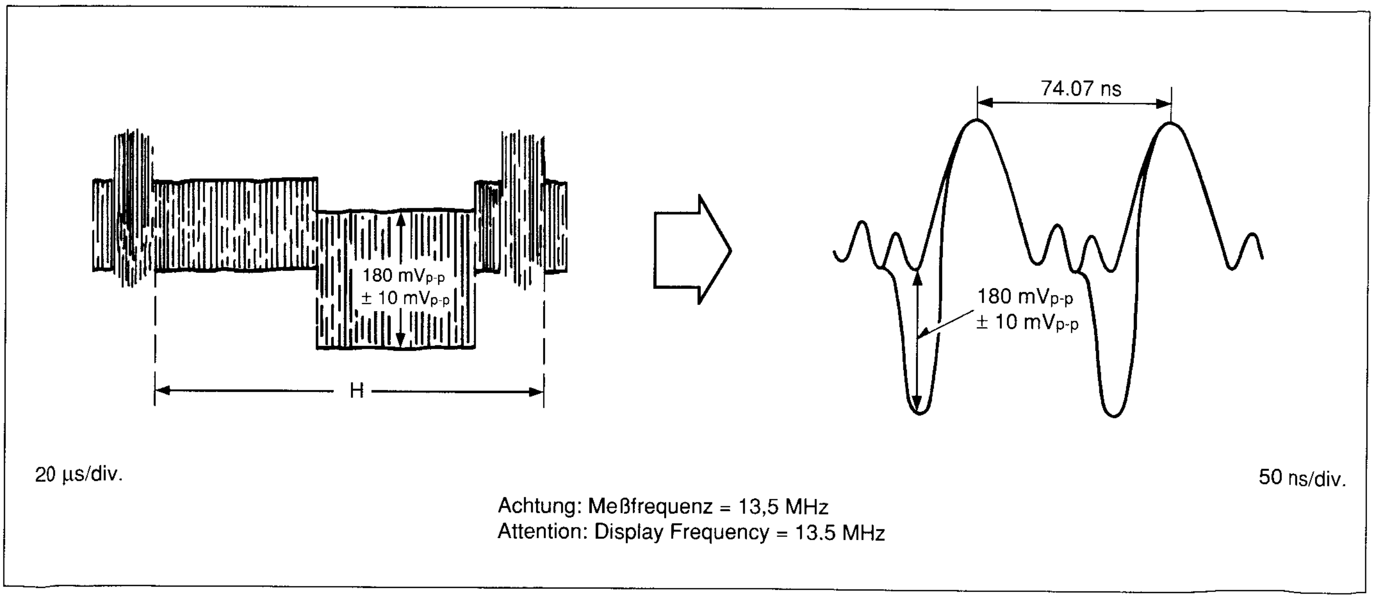
Meßpunkt	TP 201
Einsteller	VR 202
Testbild	Schwarz/Weiß-Testbild
Meßgerät	Oszilloskop ≥ 20 MHz
Spezifikation	180 mV ± 10 mV (Fig. 5)

1. Die Kamera auf das Schwarz/Weiß-Testbild richten und scharf einstellen (1400 Lux).
2. Das Oszilloskop an TP 515 (Prozeßplatine) anklemmen und auf Horizontalsignal triggern.
3. Den Blendenregler IRIS drehen, bis das Signal am TP 515 = 280 mV_{ss} beträgt.
4. Das Oszilloskop nun an TP 201 (CCD-Sensorpl.) anklemmen.
5. Mit VR 202 das untere Signalpaket auf 180 ± 10 mV_{ss} einstellen (Fig. 5).
6. Den Blendenregler IRIS wieder in die Raststellung (Mitte) drehen.

6.4 CCD Output Adjustment

Test Point	TP 201
Adjuster	VR 202
Chart	Black/White Chart
M.EQ.	Oscilloscope ≥ 20 MHz
Specification	180 mV ± 10 mV (Fig. 5)

1. Aim the camera at black/white chart and focus the lens on the object (1400 lux).
2. Connect the oscilloscope to TP 515 on the process C.B.A. (H. rate).
3. Turn the IRIS volume so that the signal level is 280 $\text{mV}_{p\text{-}p}$ (TP 515).
4. Connect the oscilloscope to TP 201 (CCD Sensor C.B.A.).
5. Adjust the sensor control VR 202 so that signal level is 180 ± 10 $\text{mV}_{p\text{-}p}$ as shown in Fig. 5.
6. Turn the IRIS control in the fix position (center).



Achtung: Meßfrequenz = 13,5 MHz
Attention: Display Frequency = 13.5 MHz

Fig. 5

6.5 Einstellung des Schwarzwertes

Meßpunkt	TP 514
Einsteller	VR 301
Blende	Objektivdeckel aufsetzen
Meßgerät	Oszilloskop
Spezifikation	0 ± 5 mVss

1. Das Objektiv mit dem Objektivdeckel abdecken.
2. Das Oszilloskop an TP 514 (Prozeßplatine) anklemmen und auf Horizontalsignal triggern.
3. Mit VR 301 einen Pegel von 0 ± 5 mV einstellen (Fig. 6).

6.5 Pedestal Level Adjustment

Test Point	TP 514
Adjuster	VR 301
Iris	Cap of the lens
M.EQ.	Oscilloscope
Specification	0 ± 5 mVp-p

1. Cover the camera lens with the lens cap.
2. Connect the oscilloscope to TP 514 on the process C.B.A. (H. rate)
3. Adjust VR 301 so that the signal level is 0 ± 5 mV (Fig. 6).

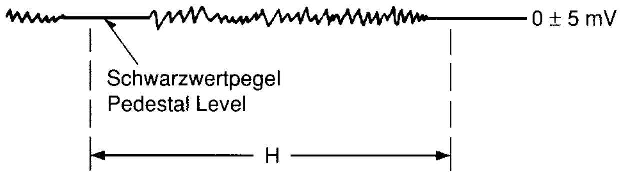


Fig. 6

6.6 Einstellung des Blendenregler-Arbeitspunktes

Meßpunkt	TP 523
Einsteller	VR 322
Blende	Objektivdeckel aufsetzen
Meßgerät	Digitalvoltmeter
Spezifikation	2,1 V ± 0,1 V

1. Den Blendenregler (IRIS) in die Raststellung drehen.
2. Das Objektiv mit dem Objektivdeckel abdecken.
3. Das Digitalvoltmeter an TP 523 anschließen.
4. Mit VR 322 eine Spannung von 2,1 V ± 0,1 V einstellen.

6.7 Einstellung der ALC

Meßpunkt	TP 515
Einsteller	VR 327
Testbild	Grauskala
Meßgerät	Oszilloskop
Spezifikation	280 ± 20 mVss

1. Die Kamera auf die log. Grauskala richten und scharf einstellen.
2. Das Oszilloskop an TP 515 (Prozeßplatine) anklemmen und auf Horizontalsignal triggern.
3. Die Kamera so ausrichten, daß die Grauskala 40 µsec breit erscheint (Fig. 7).
4. Mit VR 327 einen Signalpegel von 280 ± 20 mVss einstellen.

6.6 Iris VR Adjustment

Test Point	TP 523
Adjuster	VR 322
Iris	Cap of the lens
M.EQ.	D.V.M.
Specification	2.1 V ± 0.1 V

1. Set the Iris VR to centre fix position.
2. Cover the camera lens with lens cap.
3. Connect the volt meter to TP 523.
4. Adjust the VR 322 so that voltage at TP 523 becomes 2.1 V ± 0.1 V.

6.7 ALC Adjustment

Test Point	TP 515
Adjuster	VR 327
Chart	Gray Scale
M.EQ.	Oscilloscope
Specification	280 ± 20 mVp-p

1. Aim the camera at the logarithmic gray scale chart and focus the lens on the object.
2. Connect the oscilloscope to TP 515 on the process C.B.A. (H. rate).
3. Adjust the camera unit to obtain 40 µsec as shown in Fig. 7.
4. Adjust VR 327 so that the signal level is 280 ± 20 mVp-p.

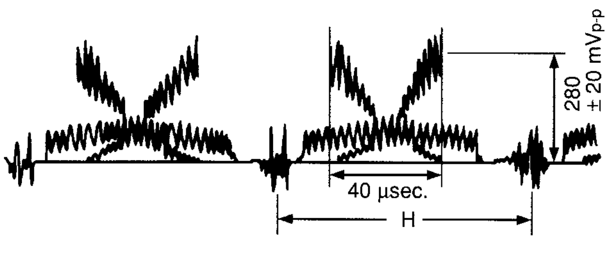


Fig. 7

6.8 YH-Verstärkungseinstellung

Meßpunkt	Fassung FP 307/6
Einsteller	VR 315
Testbild	Grauskala
Meßgerät	Oszilloskop
Spezifikation	B/A = 2,3 ± 0,15

1. Die Kamera auf die log. Grauskala richten und das Bild scharf einstellen.
2. Das Oszilloskop an die Fassung FP 307/6 anschließen (Fig. 9).
3. Mit VR 315 ein Signalverhältnis von B/A = 2,3 ± 0,15/1 einstellen (Fig. 8).

6.8 YH Gain Adjustment

Test Point	Pin 6 of FP 307
Adjuster	VR 315
Chart	Gray Scale
M.EQ.	Oscilloscope
Specification	B/A = 2.3 ± 0.15

1. Aim the camera at the logerithmic gray scale chart and focus the lens on the object.
2. Connect the oscilloscope to Pin 6 of FP 307 (Refer to Fig. 9).
3. Adjust the VR 315 (YH Level Control) so that the signal level "B/A" is 2.3 ± 0.15/1 as shown in Fig. 8).

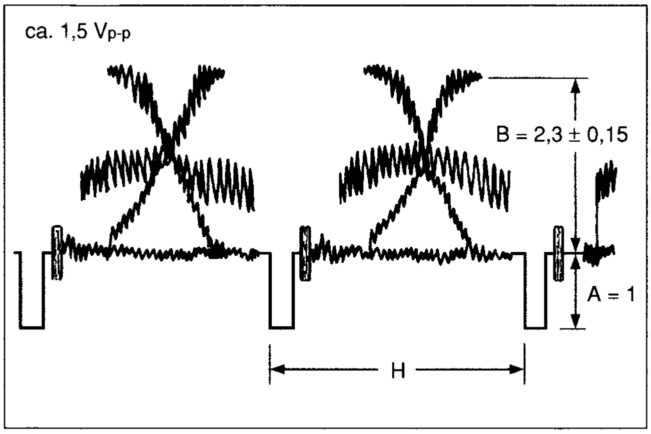


Fig. 8

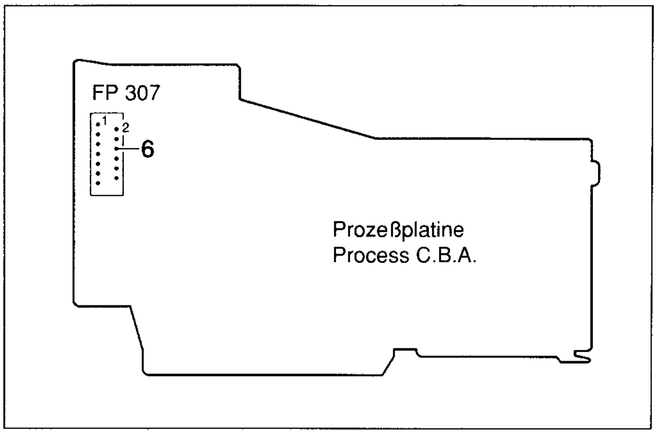


Fig. 9

6.9 Trägerfrequenz-Balance und Schwarzwert-Einstellung

Meßpunkt	Video-Ausgang
Einsteller	VR 305, 306, 304
Blende	geschlossen
Meßgeräte	Vektorskop, Oszilloskop
Spezifikation	Vektoren auf Minimum Signal auf Minimum einstellen

1. Den Blendenregler (IRIS) auf CLOSE drehen (WHITE BALANCE = INDOOR).
2. Das Vektorskop (Oszilloskop) an den Video-Ausgang anschließen.
3. Mit VR 305 und VR 306 das Signal auf Minimum einstellen.
4. Die Verstärkung am Oszilloskop (Vektorskop) hochdrehen.
5. Mit dem Regler VR 304 das Signal auf Minimum einstellen.

6.9 Carrier Balance and Black Pedestal Adjustment

Test Point	Video Output
Adjuster	VR 305, 306, 304
Iris	closed
M.EQ.	Vectorscope, Oscilloscope
Specification	Center of Vectorscope Waveform is minimized

1. Set the IRIS VR to close position (WHITE BALANCE = INDOOR).
2. Connect the vectorscope (oscilloscope) to the video output.
3. Adjust the VR 305 and VR 306 so that the waveform is minimized.
4. Turn the gain control at the oscilloscope (vectorscope) higher.
5. Adjust the VR 304 so that the waveform is minimized.

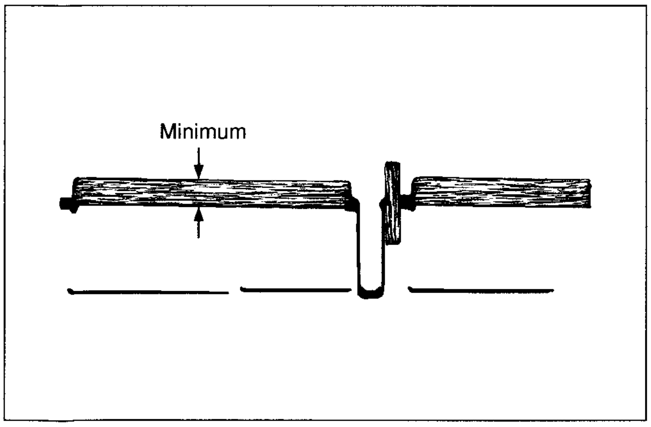


Fig. 10

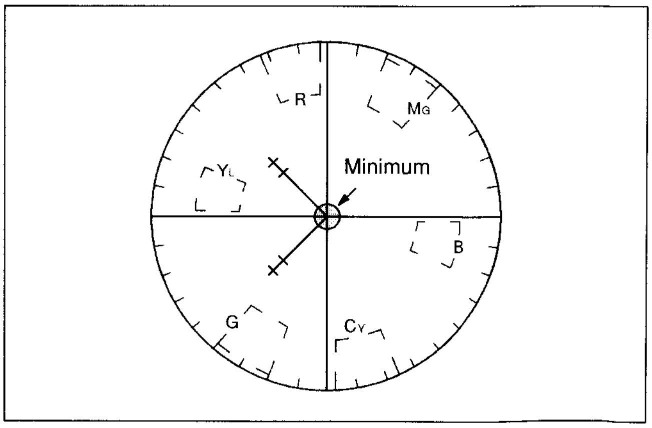


Fig. 10 a

6.10 Einstellung der Weiß-Balance für Kunstlicht

Meßpunkt	Video-Ausgang
Einsteller	VR 311 (B), VR 312 (R)
Testbild	Weiße Fläche
Meßgeräte	Vektorskop, Oszilloskop
Spezifikation	Vektoren auf Minimum Signal auf Minimum einstellen

1. Die Kamera auf eine weiße Fläche richten und scharf einstellen.
2. Das Vektorskop (Oszilloskop) an den Video-Ausgang anschließen.

6.10 Indoor White Balance Adjustment

Test Point	Video Output
Adjuster	VR 311 (B), VR 312 (R)
Chart	White Chart
M.EQ.	Vectorscope, Oscilloscope
Specification	Center of Vectorscope Waveform is minimized

1. Aim the camera at the white chart and focus the lens on the object.
2. Connect the vectorscope (oscilloscope) to the video output.

3. WHITE BALANCE auf INDOOR stellen.
4. Die Meßpunkte TP 519 und TP 521 miteinander verbinden.
5. Mit VR 311 und VR 312 (Prozeßplatine) das Signal auf Minimum einstellen.
6. Die Brücke zwischen TP 519 und TP 521 wieder entfernen.

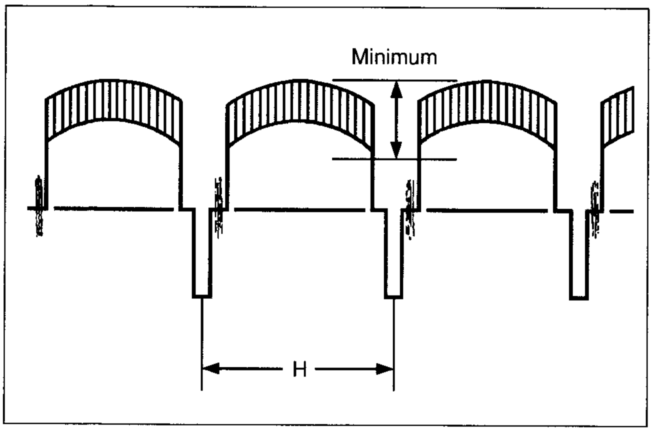


Fig. 11

6.11 Begrenzungseinstellung

Meßpunkt	Video-Ausgang
Einsteller	VR 309
Testbild	Farbtestbild
Meßgeräte	Vektorskop, Oszilloskop
Spezifikation	Maximum

1. WHITE BALANCE auf INDOOR stellen.
2. Die Kamera auf das Farbtestbild richten und das Bild scharf einstellen.
3. Das Vektorskop, Oszilloskop an den Video-Ausgang anschließen.
4. VR 309 von links beginnend nach rechts drehen, bis das Farbsignal gerade das Maximum erreicht.

6.12 Einstellung der Weiß-Balance für Außenlicht

Meßpunkt	Video-Ausgang
Einsteller	VR 528 (B), VR 529 (R)
Testbild	Weiße Fläche
Meßgeräte	Vektorskop, Oszilloskop
Spezifikation	Vektoren auf Minimum, Signal auf MInimum einstellen

1. WHITE BALANCE auf OUTDOOR stellen.
2. Die Kamera auf eine weiße Fläche richten und scharf einstellen.
3. Das Vektorscop (Oszilloskop) an den Video-Ausgang anschließen.
4. Die Meßpunkte TP 519 und TP 521 miteinander verbinden.
5. Ein C 12-Filter (80B), wie in Fig. 13 auf Seite 1 - 45 gezeigt, vor das Objektiv halten.
6. Mit VR 528 und VR 529 das Signal auf Minimum einstellen.
7. WHITE BALANCE wieder auf INDOOR schalten.
8. Die Brücken zwischen TP 519 und TP 521 wieder entfernen.

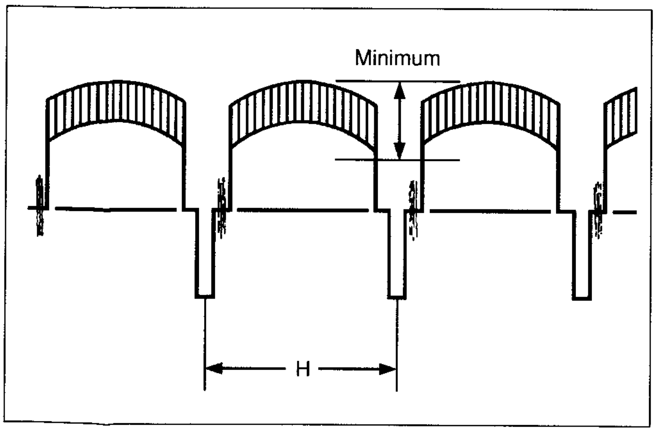


Fig. 12

3. Set the white balance to INDOOR position.
4. Connect a jumper wire between TP 519 and TP 521.
5. Adjust the VR 311, VR 312 on the process C.B.A. so that the waveform is minimized.
6. Remove the jumper wire between TP 519 and TP 521.

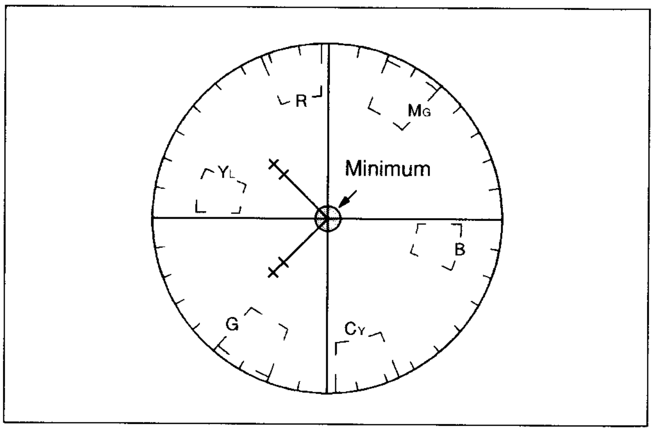


Fig. 11 a

6.11 High Intensity Suppress (HC) Adjustment

Test Point	Video Output
Adjuster	VR 309
Chart	Color Chart
M.EQ.	Vectorscope, Oscilloscope
Specification	Maximum

1. Set the WHITE BALANCE to INDOOR position.
2. Aim the camera at the color chart and focus the lens on the object.
3. Connect the vectorscope, oscilloscope to video output.
4. Adjust VR 309 clockwise, by starting from the utmost anticlockwise position, up to maximum peak of the color signal.

6.12 Outdoor White Balance Adjustment

Test Point	Video Output
Adjuster	VR 528 (B), VR 529 (R)
Chart	White Chart
M.EQ.	Vectorscope, Oscilloscope
Specification	Center of Vectorscope, Waveform is minimized

1. Set the WHITE BALANCE to OUTDOOR position.
2. Aim the camera at white chart and focus the lens on the object.
3. Connect the vectorscope (oscilloscope) to the video output.
4. Connect a jumper between TP 519 and TP 521.
5. Set the colour temperature conversion filter C 12 (80B) in front of the lens (see page 1 - 45 Fig. 13).
6. Adjust the VR 528 and VR 529 so that the waveform is minimized.
7. Set the WHITE BALANCE to INDOOR position again.
8. Disconnect the jumper wire between TP 519 and TP 521.

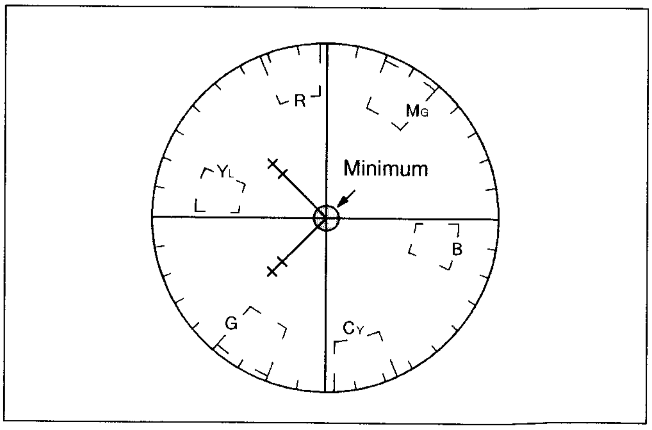
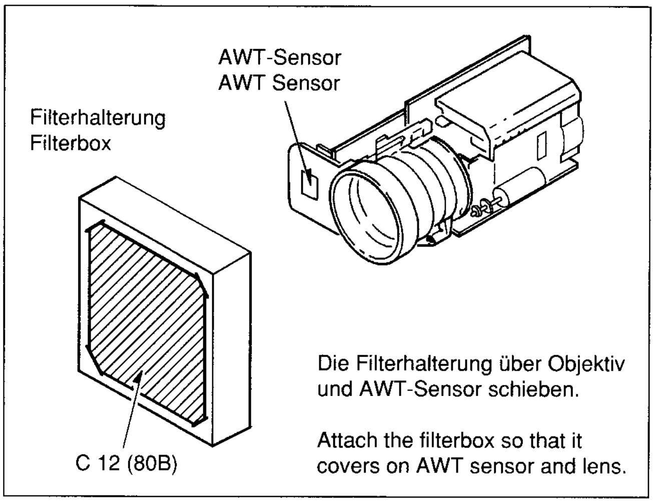


Fig. 12 a

Hinweis:
Die Filterhalterung auf das Objektiv schieben und das Filter C 12 (80B) in die Halterung einsetzen. Das Filter wandelt die Lichttemperatur von 3200 K auf 5500 K.

Note:
Attach the filter box to the lens, then set the colour temperature conversion filter C 12 (80B) to the filter box. This filter can convert the colour temperature from 3200 kelvin into around 5500 kelvin.



Die Filterhalterung über Objektiv und AWT-Sensor schieben.

Attach the filterbox so that it covers on AWT sensor and lens.

Fig. 13

6.13 Einstellung der Burstphase

Meßpunkt	Video-Ausgang
Einsteller	VR 329
Blende	Objektivdeckel aufsetzen
Meßgerät	Vektorskop
Spezifikation	135° ± 2°

1. Das Objektiv mit dem Objektivdeckel abdecken.
2. Das Vektorskop an den Video-Ausgang anschließen.
3. Das Vektorskop auf NTSC-Betrieb schalten.
4. Mit VR 329 eine Phasenlage von 135° ± 2° einstellen.

Hinweis:
Es sind nur die einzustellenden Vektoren dargestellt.

6.13 Burst Phase Adjustment

Test Point	Video Output
Adjuster	VR 329
Iris	Cap of the lens
M.EQ.	Vectorscope
Specification	135 degree ± 2 degree

1. Cover the camera lens with the lens cap.
2. Connect the vectorscope to the video output.
3. Set the vectroscope for "NTSC" mode.
4. Adjust the VR 329 so that burst phase become 135 ± 2 degree.

Note:
Only the vectors to be adjusted are shown.

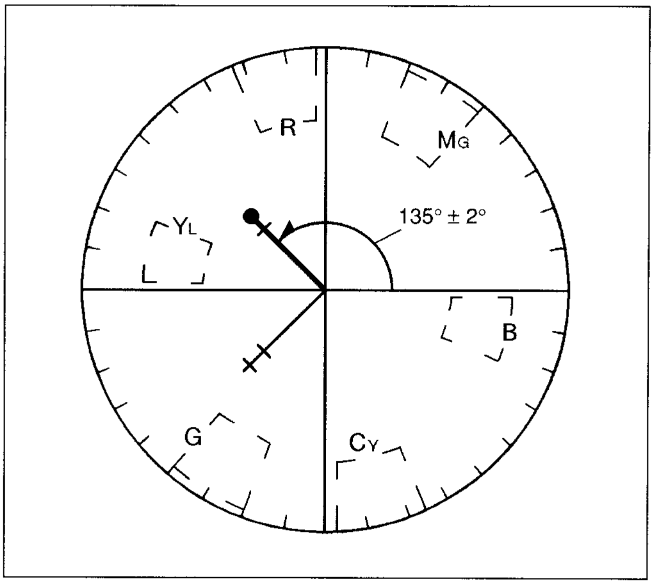


Fig. 14

6.14 Einstellung der Farbphase und -Verstärkung

Meßpunkt	Video-Ausgang
Einsteller	VR 310, VR 307, VR 308, VR 313, VR 314
Testbild	Farbtestbild
Meßgerät	Vektorskop
Spezifikation	wie Fig. 15

1. WHITE BALANCE auf INDOOR stellen.
2. Die Kamera auf das Farbtestbild richten und scharf einstellen.
3. Das Vektorskop auf NTSC-Betrieb schalten.
4. Mit VR 310 die beiden Rotvektoren zur Deckung bringen (Fig. 15).
5. Das Vektorskop auf PAL-Betrieb schalten.
6. Das Vektorskop an den Video-Ausgang anschließen.

6.14 Colour Phase and Gain Adjustment

Test Point	Video Output
Adjuster	VR 310, VR 307, VR 308, VR 313, VR 314
Chart	Color Chart
M.EQ.	Vectorscope
Specification	Refer to Fig. 15

1. Set the WITHE BALANCE to INDOOR position.
2. Aim the camera at a color chart and focus the lens on the object.
3. Set the vectorscope to NTSC mode.
4. Adjust the VR 310 so that cracked red vector comes one (Fig. 15).
5. Set the vectorscope to PAL mode.
6. Connect the vectorscope to the video output.

7. Mit den Reglern VR 307 und VR 308 die Phase der Farbvektoren sowie mit VR 314 und VR 313 die Verstärkung der entsprechenden Farben, wie in Fig. 15 gezeigt, einstellen.

7. Adjust the colour phase controls VR 307 and VR 308 the gain controls VR 314 and VR 313 so that the vector of each colour is as shown in Fig. 15.

Hinweis:
Es sind nur die einzustellenden Vektoren dargestellt.

Note:
Only the vectors to be adjusted are shown.

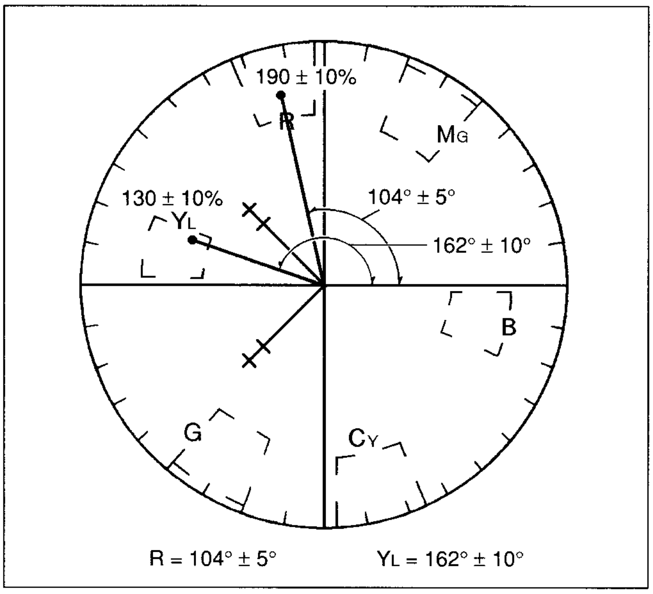


Fig. 15

6.15 Einstellung des automatischen Weißabgleichs

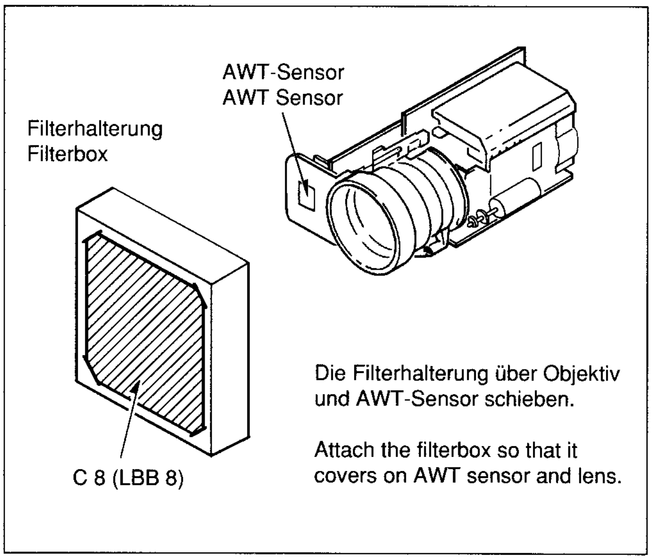
Meßpunkt	Video-Ausgang
Einsteller	VR 525 (B-Offset), VR 526 (R-Offset), VR 523 (R-Gain), VR 527 (B-Gain)
Testbild	Weiße Fläche
Meßgeräte	Vektorskop, Oszilloskop
Spezifikation	Vektoren auf Minimum, Signal auf Minimum einstellen

1. WHITE BALANCE auf AUTO stellen.
2. Die Kamera auf eine weiße Fläche richten und scharf einstellen.
3. Das Vektorskop (Oszilloskop) an den Video-Ausgang anschließen.
4. Die Meßpunkte TP 519 und TP 521 auf der Prozeßplatine miteinander verbinden.
5. Mit den Reglern VR 525 und VR 526 das Signal auf Minimum einstellen (Fig. 17).
6. Die Filterhalterung über das Objektiv und den AWT-Sensor schieben und das C 8 Filter (LBB 8) in die Filterhalterung einstecken (Fig. 16).

6.15 AWT Mode Adjustment

Test Point	Video Output
Adjuster	VR 525 (B-Offset), VR 526 (R-Offset), VR 523 (R-Gain), VR 527 (B-Gain)
Chart	White Chart
M.EQ.	Vectorscope, Oscilloscope
Specification	Center of Vectorscope, Waveform is minimized

1. Set the WITHE BALANCE to AUTO position.
2. Aim the camera at the white chart and focus the lens on the object.
3. Connect the vectorscope (oscilloscope) to the video output.
4. Connect the jumper wire across TP 519 and TP 521 on the process C.B.A.
5. Adjust the controls VR 525 and VR 526 so that the waveform is minimized as shown in Fig. 17.
6. Attach the filter box so that it covers on AWT sensor and lens and set the C 8 color temperature conversion filter (LBB 8) to the filter box as shown in Fig. 16.



Die Filterhalterung über Objektiv und AWT-Sensor schieben.

Attach the filterbox so that it covers on AWT sensor and lens.

Fig. 16

7. Mit den Reglern VR 523 und VR 527 das Signal auf Minimum einstellen (Fig. 17).
8. Nun das Filter zusammen mit der Filterhalterung entfernen.
9. Ist das Signal nicht mehr auf Minimum, mit VR 525 und VR 526 das Signal wieder auf Minimum bringen.
10. Die Brücke zwischen TP 519 und TP 521 wieder entfernen.

7. Adjust the controls VR 523 and VR 527 so that the waveform ist minimized as shown in Fig. 17.
8. Next, remove the colour temperature conversion filter with the filter box from the lens.
9. If the colour vectors do not collect at the centre, adjust the controls VR 525 and VR 526 so that the waveform minimized.
10. Disconnect the jumper wire between TP 519 and TP 521.

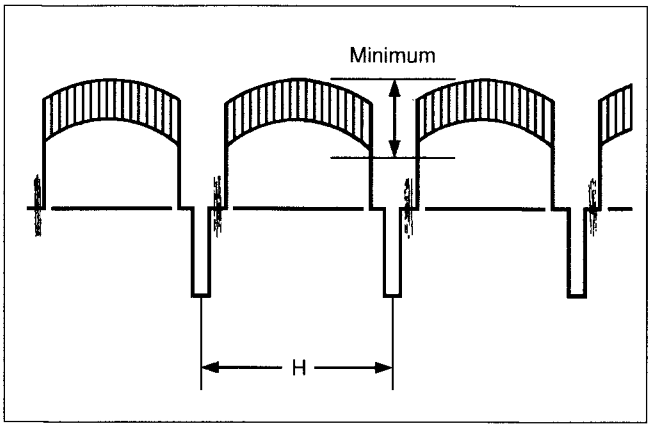


Fig. 17

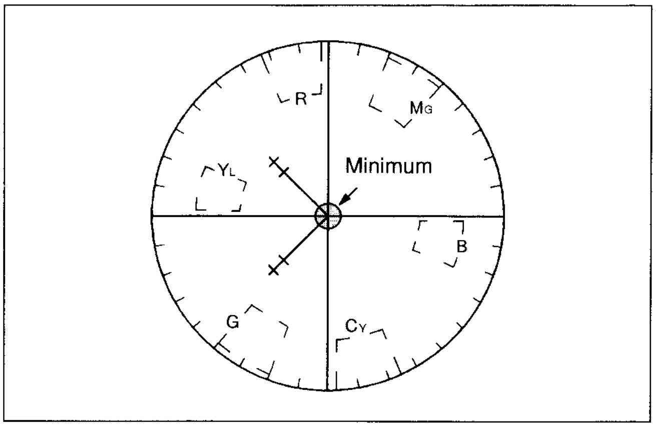


Fig. 17 a

6.16 Einstellung des Schwarzwertes (TELEPHOTO Betrieb)

Meßpunkt	TP 514
Einsteller	VR 331
Blende	Objektivdeckel aufsetzen
Meßgerät	Oszilloskop
Spezifikation	0 ± 5 mVss

1. Die Taste TELEPHOTO gedrückt halten.
2. Das Objektiv mit dem Objektivdeckel abdecken.
3. Das Oszilloskop an TP 514 (Prozeßplatine) anklemmen und auf Horizontalsignal triggern.
4. Mit VR 331 einen Pegel von 0 ± 5 mV einstellen (Fig. 18).

6.16 Pedestal Level Adjustment (TELEPHOTO mode)

Test Point	TP 514
Adjuster	VR 331
Iris	Cap of the lens
M.EQ.	Oscilloscope
Specification	0 ± 5 mVp-p

1. Set the TELEPHOTO button to ON.
2. Cover the camera lens with the lens cap.
3. Connect the oscilloscope to TP 514 on the process C.B.A. (H. rate)
4. Adjust VR 331 so that the signal level is 0 ± 5 mV (Fig. 18).

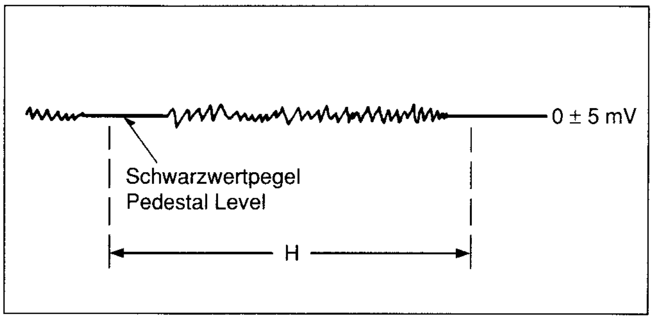


Fig. 18

6.17 YH-Verstärkungseinstellung (TELEPHOTO Betrieb)

Meßpunkt	Fassung FP 307/6
Einsteller	VR 316
Testbild	Grauskala
Meßgerät	Oszilloskop
Spezifikation	B/A = 2,3 ± 0,15

1. Die Taste TELEPHOTO gedrückt halten.
2. Die Kamera auf die log. Grauskala richten und das Bild scharf einstellen.
3. Das Oszilloskop an die Fassung FP 307/6 anschließen (Fig. 20).
4. Mit VR 316 ein Signalverhältnis von B/A = 2,3 ± 0,15/1 einstellen (Fig. 19).

6.17 YH Gain Adjustment (TELEPHOTO mode)

Test Point	Pin 6 of FP 307
Adjuster	VR 316
Chart	Gray Scale
M.EQ.	Oscilloscope
Specification	B/A = 2.3 ± 0.15

1. Set the TELEPHOTO button to ON.
2. Aim the camera at the logerithmic gray scale chart and focus the lens on the object.
3. Connect the oscilloscope to Pin 6 of FP 307 (Refer to Fig. 20).
4. Adjust the VR 316 so that the signal level "B/A" is 2.3 ± 0.15/1 as shown in Fig. 19).

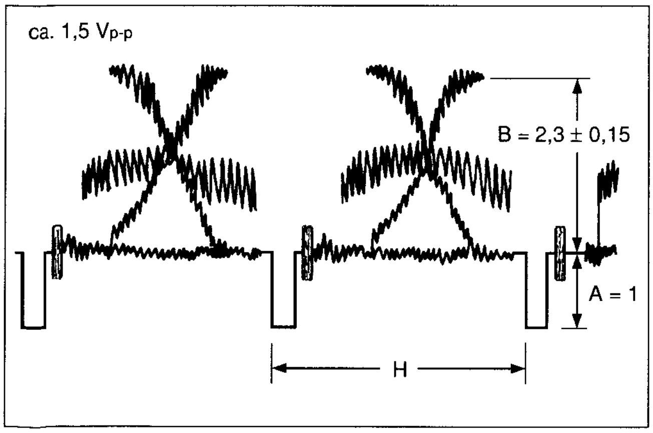


Fig. 19

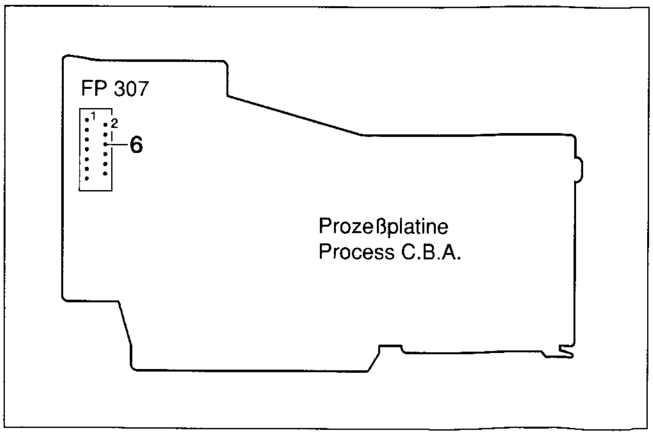


Fig. 20

6.18 Trägerfrequenz-Balance und Schwarzwert-Einstellung (TELEPHOTO Betrieb)

Meßpunkt	Video-Ausgang
Einsteller	VR 332, 533
Blende	geschlossen
Meßgeräte	Vektorskop, Oszilloskop
Spezifikation	Vektoren auf Minimum Signal auf Minimum einstellen

1. Die Taste TELEPHOTO gedrückt halten.
2. Den Blendenregler (IRIS) auf CLOSE drehen (WHITE BALANCE = AUTO).
3. Das Vektorskop (Oszilloskop) an den Video-Ausgang anschließen.
4. Mit VR 332 und VR 533 das Signal auf Minimum einstellen.

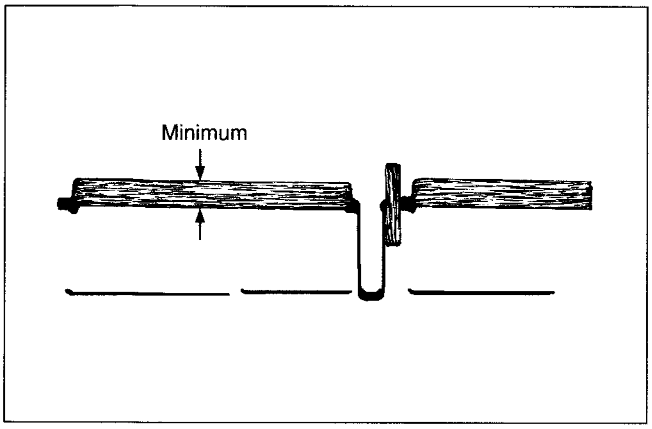


Fig. 21

6.19 Begrenzungseinstellung (TELEPHOTO Betrieb)

Meßpunkt	Video-Ausgang
Einsteller	VR 317
Testbild	Farbtestbild
Meßgeräte	Vektorskop, Oszilloskop
Spezifikation	Maximum

1. Die Taste TELEPHOTO gedrückt halten.
2. WHITE BALANCE auf AUTO stellen.
3. Die Kamera auf das Farbtestbild richten und das Bild scharf einstellen.
4. Das Vektorskop, Oszilloskop an den Video-Ausgang anschließen.
5. VR 317 von links beginnend nach rechts drehen, bis das Farbsignal gerade das Maximum erreicht.

6.20 Pegeleinstellung für verz. Farbe 1H/2H/3H (TELEPHOTO Betrieb)

Meßpunkte	CL 305, CL 302, CL 303, CL 304 (Lötpunkte)
Einsteller	VR 530, VR 531, VR 532
Blende	Objektivdeckel aufsetzen
Meßgerät	Oszilloskop
Spezifikation	Signale von CL 305 u. CL 302, 303, 304 auf gleichen Pegel (0 ± 5 mV$_{ss}$)

1. Die Taste TELEPHOTO gedrückt halten.
2. Das Objektiv mit dem Objektivdeckel abdecken.
3. Das Oszilloskop an die Lötpunkte CL 305 (Kanal 1) und CL 302 (Kanal 2) anschließen.
4. Mit VR 530 die Impulssignale auf gleiche Höhe (0 ± 5 mV$_{ss}$) einstellen.
5. Den Kanal 2 nun von CL 302 an CL 303 anschließen. (Kanal 1 bleibt an CL 305).
6. Mit VR 531 die Impulssignale auf gleiche Höhe (0 ± 5 mV$_{ss}$) einstellen.
7. Den Kanal 2 nun von CL 303 an CL 304 anschließen. (Kanal 1 bleibt an CL 305).
8. Mit VR 532 die Impulssignale auf gleiche Höhe (0 ± 5 mV$_{ss}$) einstellen.

6.18 Carrier Balance and Black Pedestal Adjustment (TELEPHOTO mode)

Test Point	Video Output
Adjuster	VR 332, 533
Iris	closed
M.EQ.	Vectorscope, Oscilloscope
Specification	Center of Vectorscope Waveform is minimized

1. Set the TELEPHOTO button to ON.
2. Set the IRIS VR to close position (WHITE BALANCE = AUTO).
3. Connect the vectorscope (oscilloscope) to the video output.
4. Adjust the VR 332 and VR 533 so that the waveform is minimized.

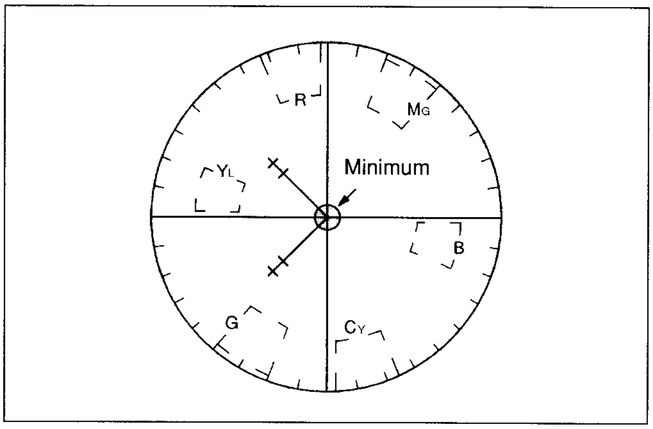


Fig. 21 a

6.19 High Intensity Suppress (HC) Adjustment (TELEPHOTO mode)

Test Point	Video Output
Adjuster	VR 317
Chart	Color Chart
M.EQ.	Vectorscope, Oscilloscope
Specification	Maximum

1. Set the TELEPHOTO button to ON.
2. Set the WHITE BALANCE to AUTO position.
3. Aim the camera at the color chart and focus the lens on the object.
4. Connect the vectorscope, oscilloscope to video output.
5. Adjust VR 317 clockwise, by starting from the utmost anticlockwise position, up to maximum peak of the color signal.

6.20 Chroma 1H/2H/3H Delay Level Adjustment (TELEPHOTO mode)

Test Points	CL 305, CL 302, CL 303, CL 304 (Test round)
Adjuster	VR 530, VR 531, VR 532
Iris	Cap of the lens
M.EQ.	Oscilloscope
Specification	Signals of CL 305 and CL 302, 303, 304 to the same level (0 ± 5 mV$_{p-p}$)

1. Set the TELEPHOTO button to ON.
2. Cover the camera lens with the lens cap.
3. Connect the oscilloscope to the test rounds CL 305 (CH 1) and CL 302 (CH 2).
4. Adjust VR 530 so that the level difference becomes (0 ± 5 mV$_{p-p}$).
5. Reconnect the CH 2 probe from CL 302 to CL 303, (CH1 is still connecting to CL 305).
6. Adjust VR 531 so that the level difference becomes (0 ± 5 mV$_{p-p}$).
7. Reconnect the CH 2 probe from CL 303 to CL 304, (CH1 is still connecting to CL 305).
8. Adjust VR 532 so that the level difference becomes (0 ± 5 mV$_{p-p}$).

Autofokusteil

6.21 Einstellung des Autofokus-Rahmens

Meßpunkte	TP 702, TP 703
Einsteller	C 703
Meßgerät	Oszilloskop
Spezifikation	T = 9,6 ± 0,4 µsec

1. Mit C 703 (Autofokus-Platine) den Abstand T wie in Fig. 22 gezeigt einstellen.

Auto Focus Section

6.21 AF Gate Adjustment

Test Points	TP 702, TP 703
Adjuster	C 703
M.EQ.	Oscilloscope
Specification	T = 9.6 ± 0.4 µsec

1. Set the AF clock freq. control C 703 (Auto Focus C.B.A.) as shown in Fig. 22.

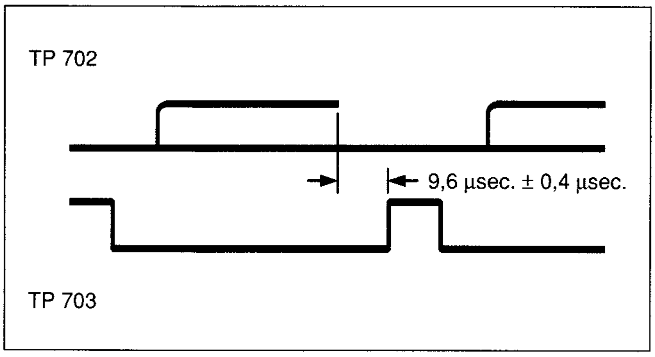


Fig. 22

6.22 Einstellung der Aktuatorspannung

Meßpunkt	TP 704
Einsteller	VR 703
Blende	Objektivdeckel aufsetzen
Meßgerät	Oszilloskop
Spezifikation	A = 11 V_{ss} ± 0,5 V_{ss}

1. Den FOCUS auf MANUAL schalten.
2. Das Objektiv mit dem Objektivdeckel abdecken.
3. Das Oszilloskop an TP 704 anschließen.
4. Mit VR 703 einen Signalpegel von A = 11 V_{ss} ± 0,5 V_{ss} einstellen (Fig. 23).

6.22 Bimolf Gain Control Adjustment

Test Point	TP 704
Adjuster	VR 703
Iris	Cap of the lens
M.EQ.	Oscilloscope
Specification	A = 11 V_{p-p} ± 0,5 V_{p-p}

1. Set the focus to the MANUAL position.
2. Cover the camera lens with the lens cap.
3. Connect the scope to the TP 704.
4. Adjust the bimolf gain control (VR 703) so that the signal level (A) is 11 V_{p-p} ± 0.5 V_{p-p}.

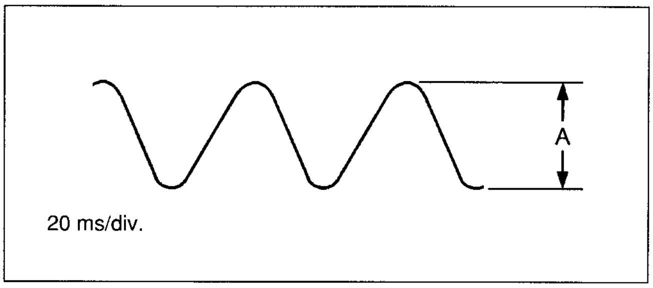


Fig. 23

6.23 Einstellung der Autofokus-Verstärker

Meßpunkte	TP 518, TP 516, TP 521, TP 520
Einsteller	VR 333, VR 334
Testbild	Grauskala
Meßgerät	Digitalvoltmeter

Hinweis:

TP 516, TP 518, TP 520, TP 521 = Prozeßplatine
VR 333, VR 334 = Prozeßplatine

1. Die Meßpunkte TP 516 und TP 521 verbinden, um die Blende zu schließen.
2. Mit VR 333 am TP 518 eine Spannung von 1,74 V ± 0,02 V einstellen.
3. Die Verbindung von TP 516 und TP 521 entfernen.
4. Die Meßpunkte TP 516 und TP 520 verbinden, um die Blende zu öffnen.
5. Mit VR 334 am TP 518 eine Spannung von 3,72 V ± 0,05 V einstellen.
6. Die Verbindung von TP 516 und TP 520 entfernen.
7. Nun erneut die Meßpunkte TP 516 und TP 521 verbinden und kontrollieren, ob am TP 518 eine Spannung von 1,74V ± 0,02 V ansteht.
8. Steht diese Spannung nicht an, die Punkte 1- 6 wiederholen.

6.23 Hall AMX Adjustment

Test Point	TP 518, TP 516, TP 521, TP 520
Adjuster	VR 333, VR 334
Chart	Gray scale
M.EQ.	D.V.M.

Note:

TP 516, TP 518, TP 520, TP 521 = Process C.B.A.
VR 333, VR 334 = Process C.B.A.

1. Connect a jumper wire between TP 516 and TP 521 to close the Iris.
2. Adjust the amp. control (VR 333) so that the voltage level at TP 518 is 1.74 V ± 0.02 V.
3. Disconnect the jumper wire between TP 516 ant TP 521.
4. Next, connect a jumper wire between TP 516 and TP 520 to open the Iris.
5. Adjust the amp. control (VR 334) so that the voltage level of TP 518 is 3.72 V ± 0.05 V.
6. Disconnect the jumper wire between TP 516 and TP 520.
7. Next, confirm the voltage level at TP 518 by connecting a jumper wire between TP 516 and TP 521.
8. If the voltage level at TP 518 is not 1.74 V ± 0.02 V, repeat steps 1- 6.

6.24 Autofokus-Frequenzeinstellung

Meßpunkte	TP 705
Einsteller	C 737
Testbild	Grau/Weiß-Testbild
Meßgerät	Oszilloskop
Spezifikation	A = 2,8 V ± 0,05 V

Hinweis:
TP 705, TP 710, C 737 = Autofokus-Platine
TP 516, TP 520 = Prozeßplatine

1. Die Optik der Kamera auf TELE und den FOCUS auf AUTO stellen.
2. Die Meßpunkte TP 516 und TP 520 kurzschließen, um die Blende zu öffnen.
3. Die Kamera auf das Grau/Weiß-Testbild richten (Seite 1-63).
4. Kontrollieren, ob die Spannung am TP 710 = 180 mV_{ss} ± 10 mV_{ss} beträgt (Fig. 25).
5. Wird diese Spannung nicht erreicht, die Beleuchtung so ändern, bis am TP 710 die 180 mV_{ss} ± 10 mV_{ss} anstehen.

6.24 AF VH Frequency Adjustment

Test Point	TP 705
Adjuster	C 737
Chart	Gray/White Chart
M.EQ.	Oscilloscope
Specification	A = 2.8 V ± 0,05 V

Note:
TP 705, TP 710, C 737 = Auto Focus C.B.A.
TP 516, TP 520 = Process C.B.A.

1. Zoom all the way in TELE position and set the FOCUS to AUTO position.
2. Connect a jumper between TP 516 and TP 520 to open the iris.
3. Aim the camera at the gray/white chart (page 1-63).
4. Confirm that the voltage at TP 710 is 180 $\text{mV}_{p\text{-}p}$ ± 10 $\text{mV}_{p\text{-}p}$ (Fig. 25).
5. If the voltage at TP 710 is not 180 $\text{mV}_{p\text{-}p}$ ± 10 $\text{mV}_{p\text{-}p}$, adjust the light source.

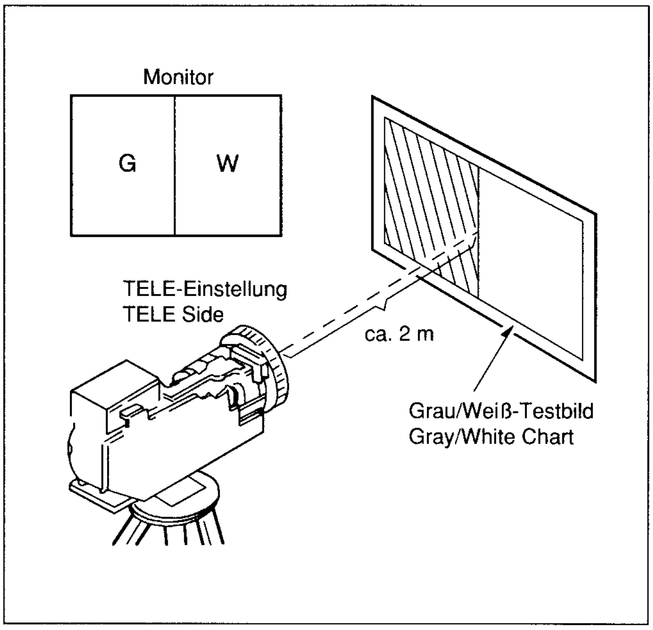


Fig. 24

6. Mit C 737 am TP 705 einen Pegel „A" von 2,8 V ± 0,05 V einstellen (Fig. 26).

6. Adjust the C 737 so that the "A" level at TP 705 is 2.8 V ± 0.05 V (Fig. 26).

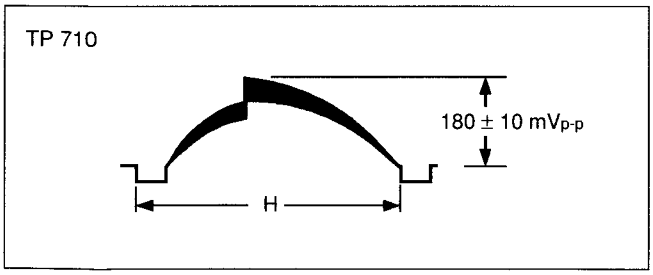


Fig. 25

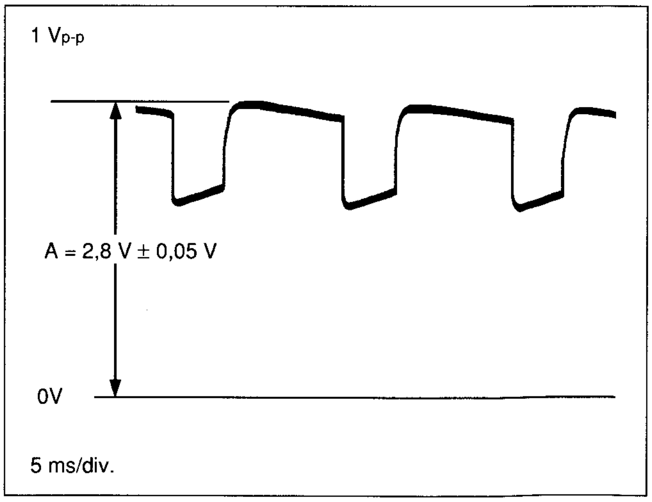


Fig. 26

7. Einstellung des elektrischen Suchers

Die folgenden Einstellungen sind für den elektronischen Sucher:

- Der Kamerateil muß komplett abgeglichen sein, bevor der Sucher-Abgleich vorgenommen wird.

7.1 Zerlegen des Suchers

1. Den Sucher abnehmen, wie im Abschnitt "Servicevorbereitungen" (Seite 1-6) beschrieben.
2. Das Okular nach links drehen und herausziehen (Fig. 1).
3. Die Schrauben (A) entfernen und den Sucher vorsichtig auseinandernehmen (3 Verriegelungen).
4. Zum Abgleich den Sucher wieder an den Camerarecorder anschließen.

7. Viewfinder Adjustment

The following adjustments are required for the electronic viewfinder:

- The camera section must be completely aligned before viewfinder adjustment is made.

7.1 Disassembly of the EVF Unit

1. Remove the EVF unit as described in section "Service Preparations" on page 1-6.
2. Turn the ocular to the left and pull it off (Fig. 1).
3. Now remove the screws (A) and carefully disassemble the EVF unit (3 locking tabs).
4. For alignment connect the EVF unit to the camcorder.

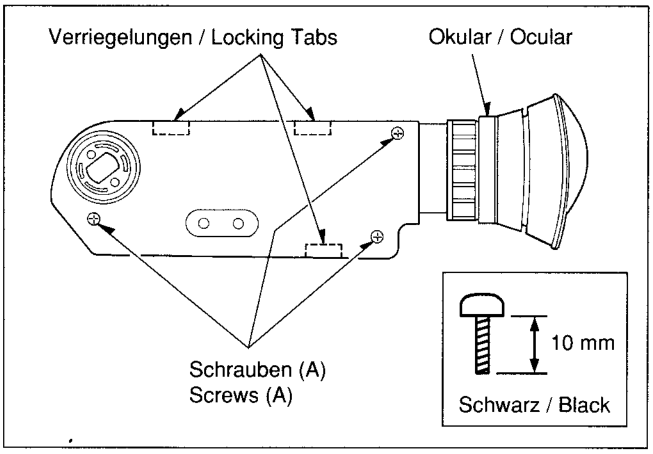


Fig. 1

7.2 Einstellung der Bildlage

1. Die Kamera auf das Kreis-Testbild richten.
2. Mit den Magnetscheiben an der Ablenkeinheit das Sucherbild ausrichten.

7.2 Centering Adjustment

1. Aim the camera at the ball chart.
2. Adjust the deflection yoke centering magnets by turning them so that the picture on monitor TV is centered.

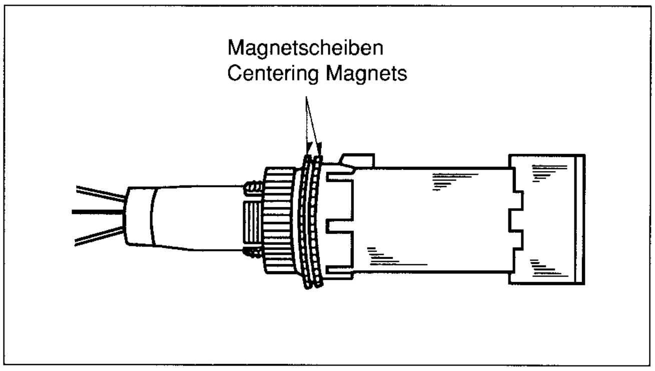


Fig. 2

7.3 Einstellung der Horizontalfrequenz

Meßpunkt	P 801 Pin 1
Einsteller	VR 802
Meßgerät	Frequenzzähler
Spezifikation	15,9 kHz ± 0,1 kHz

1. Das Folienkabel zur Kamera abziehen.
2. Den Frequenzzähler an P 801 Stift 1 anklemmen.
3. Mit VR 802 eine Frequenz von 15,9 kHz ± 0,1 kHz einstellen.
4. Das Folienkabel zur Kamera wieder anstecken.

7.4 Einstellung der Schärfe

Meßpunkt	Sucher
Einsteller	VR 803
Testbild	Auflösung
Spezifikation	Beste Auflösung

1. Den Camerarecorder auf CAMERA-Betrieb schalten.
2. Die Kamera auf das Testbild Auflösung richten und scharf einstellen.
3. Mit VR 803 im Sucher die beste Auflösung einstellen.

7.3 Horizontal Hold Adjustment

Test Point	P 801 Pin 1
Adjuster	VR 802
M.EQ.	Frequency counter
Specification	15.9 kHz ± 0.1 kHz

1. Remove the flexible cable to the camera.
2. Connect the frequency counter to pin 1 of P 801.
3. Adjust VR 802 so that the reading of the frequency counter is 15.9 kHz ± 0.1 kHz.
4. Connect the flexible cable to the camera.

7.4 Focus Control Adjustment

Test Point	Viewfinder
Adjuster	VR 803
Chart	Resolution
Specification	Best resolution

1. Set the camcorder in CAMERA mode.
2. Aim the camera at the resolution chart and focus the lens on the object.
3. Adjust VR 803 to best resolution in the viewfinder.

7.5 Einstellung der Bildhöhe

Meßpunkt	Sucher
Einsteller	VR 801
Testbild	Kreis
Spezifikation	Gute Geometrie

1. Die Kamera auf das Kreis-Testbild richten, so daß die Begrenzungspfeile des Testbildes die Bildbegrenzung berühren.
2. Den Regler VR 801 so einstellen, daß der Kreis im Testbild richtig abgebildet wird (Fig. 3).

7.5 EVF V-Size AdjustmentTest

Point	Viewfinder
Adjuster	VR 801
Chart	Ball Chart
Specification	True circle

1. Aim the camera at the ball chart, and line up the reference arrow heads with edge of the raster (blanking) on the viewfinder.
2. Then adjust the V. size VR 801 so that the circle in the chart is nearly a true circle (Fig. 3).

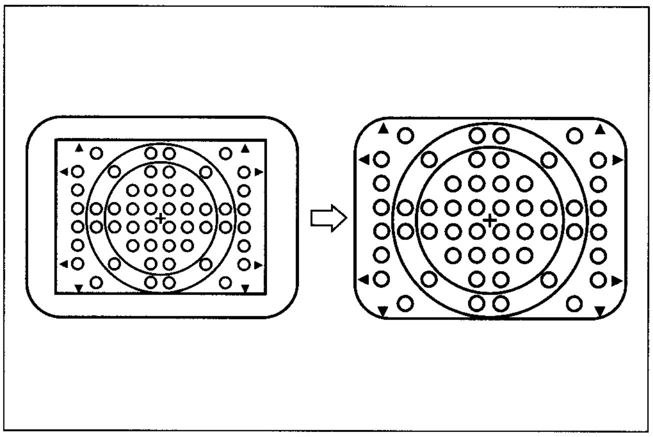


Fig. 3

7.6 Einstellung der Helligkeit

Meßpunkt	Sucher
Einsteller	VR 804
Testbild	Grauskala
Spezifikation	Natürliche Abstufung

1. Die Kamera auf die log. Grauskala richten und das Bild scharf einstellen.
2. Den Regler VR 804 so einstellen, daß die Graustufen im Sucher mit den Graustufen im Monitor übereinstimmen.

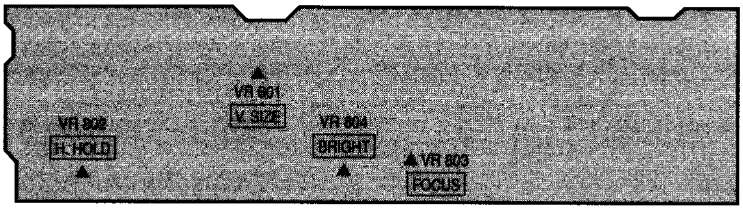
7.6 Brigthness Adjustment

Test Point	Viewfinder
Adjuster	VR 804
Chart	Gray Scale
Specification	Natural gradation

1. Aim the camera at the logarithmic gray scale chart and focus the lens on the object.
2. Adjust VR 804 so that the black and white gradations will be the same on the view finder screen as that in the monitor.

Lage der Meßpunkte und Einsteller (Sucher)

Location of Test Points and Controls (EVF)

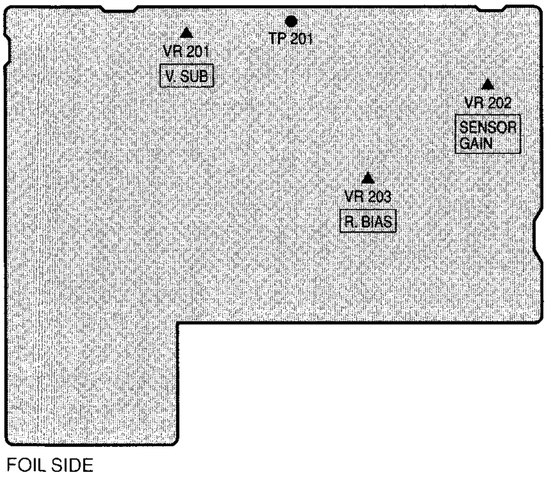


FOIL SIDE

Lage der Meßpunkte und Einsteller (Kamerateil)

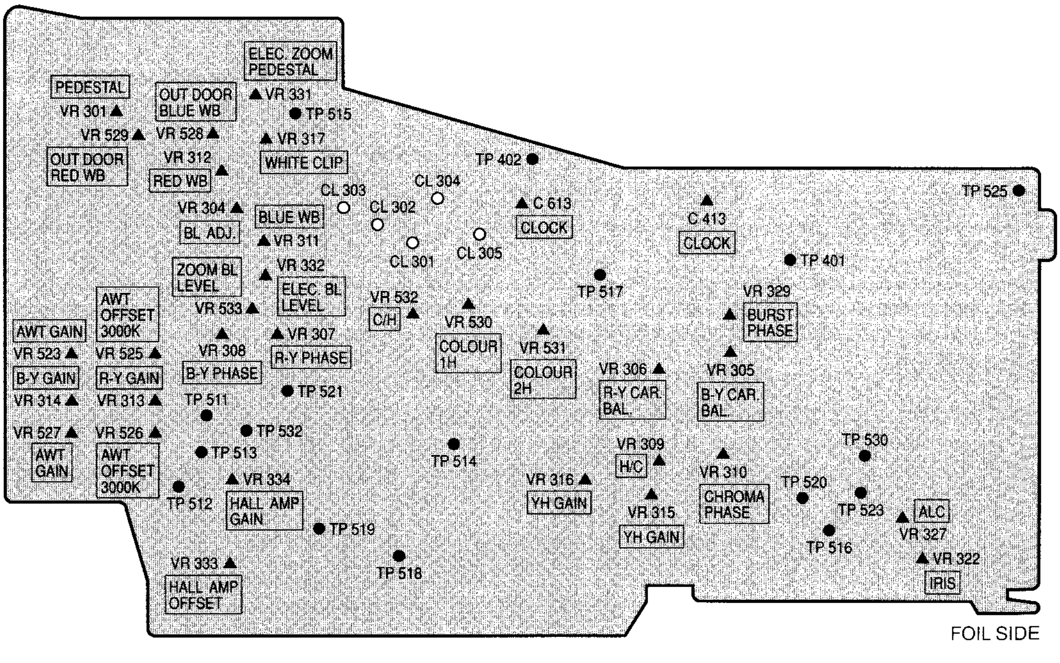
Location of Test Points and Controls (Camera Section)

CCD-Sensorplatine
CCD Sensor C.B.A.



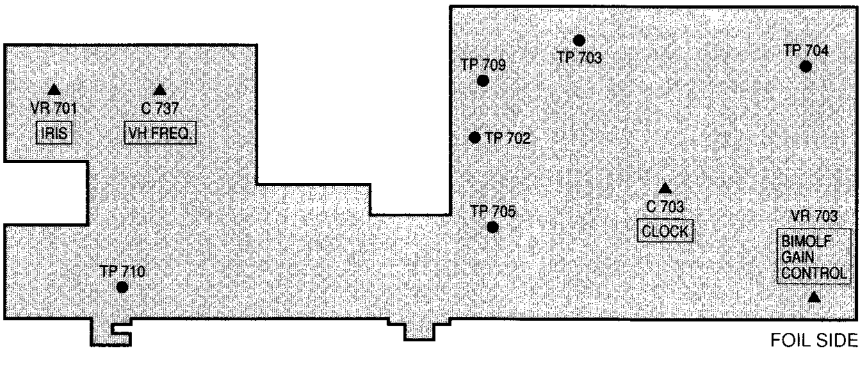
VR 201
V. SUB
TP 201
VR 202
SENSOR GAIN
VR 203
R. BIAS
FOIL SIDE

Prozeßplatine
Process C.B.A.



ELEC. ZOOM PEDESTAL
PEDESTAL
OUT DOOR BLUE WB
VR 331
VR 301
TP 515
VR 529
VR 528
VR 317
OUT DOOR RED WB
VR 312
WHITE CLIP
RED WB
TP 402
CL 303
CL 304
TP 525
VR 304
CL 302
C 613
C 413
BLUE WB
CLOCK
CLOCK
BL ADJ.
VR 311
CL 301
CL 305
TP 401
ZOOM BL LEVEL
VR 332
ELEC BL LEVEL
TP 517
VR 329
AWT OFFSET 3000K
VR 532
VR 533
C/H
VR 530
BURST PHASE
AWT GAIN
VR 307
COLOUR 1H
VR 531
VR 523
VR 525
VR 308
R-Y PHASE
COLOUR 2H
VR 306
VR 305
B-Y GAIN
R-Y GAIN
B-Y PHASE
R-Y CAR. BAL.
B-Y CAR. BAL.
VR 314
VR 313
TP 511
TP 521
VR 527
VR 526
TP 532
VR 309
TP 530
AWT GAIN
AWT OFFSET 3000K
TP 513
TP 514
H/C
VR 310
VR 334
VR 316
TP 520
TP 512
HALL AMP GAIN
YH GAIN
VR 315
CHROMA PHASE
TP 523
ALC
TP 519
YH GAIN
VR 327
TP 516
VR 333
TP 518
VR 322
HALL AMP OFFSET
IRIS
FOIL SIDE

Autofokus-Platine
Auto Focus C.B.A.

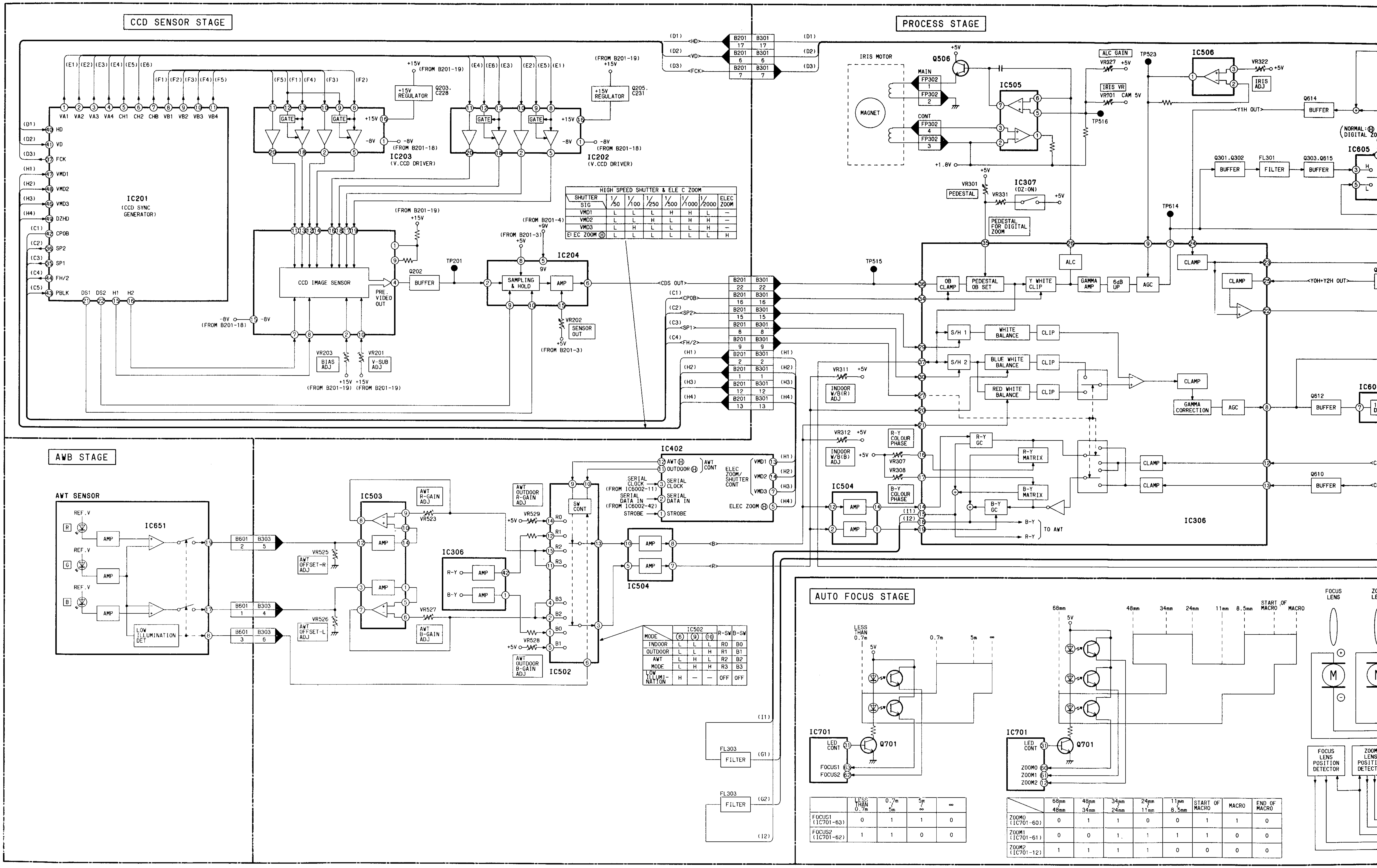


TP 709
TP 703
TP 704
VR 701
C 737
IRIS
VH FREQ.
TP 702
TP 705
C 703
VR 703
CLOCK
BIMOLF GAIN CONTROL
TP 710
FOIL SIDE

Notizen / Memo

Blockschaltbild des Kamerateiles
Camera Stage Block Diagram

Blockschaltbild des Kamerateiles
Camera Stage Block Diagram


CCD SENSOR STAGE
IC201 (CCD SYNC GENERATOR)
HD
VD
FCK
VMD1
VMD2
VMD3
DZHD
CP0B
SP2
SP1
FH/2
PBLK
VA1 VA2 VA3 VA4 CH1 CH2 CHB VB1 VB2 VB3 VB4
DS1 DS2 H1 H2
IC203 (V.CCD DRIVER)
IC202 (V.CCD DRIVER)
GATE
+15V REGULATOR
Q203, C228
Q205, C231
(FROM B201-19)
(FROM B201-18)
CCD IMAGE SENSOR
PRE. VIDEO OUT
Q202 BUFFER
TP201
IC204
SAMPLING & HOLD
AMP
<CDS OUT>
VR202 SENSOR OUT
VR203 BIAS ADJ
VR201 V-SUB ADJ
B201 B301
PROCESS STAGE
IRIS MOTOR
MAGNET
MAIN
CONT
FP302
Q506
IC505
ALC GAIN
VR327
IRIS VR
VR701 CAM 5V
TP523
TP516
IC506
VR322 IRIS ADJ
<Y1H OUT>
Q614 BUFFER
(NORMAL: H DIGITAL ZO
IC605
Q301, Q302 BUFFER
FL301 FILTER
Q303, Q615 BUFFER
VR301 PEDESTAL
VR331
IC307 (DZ:ON)
PEDESTAL FOR DIGITAL ZOOM
TP614
TP515
OB CLAMP
PEDESTAL OB SET
Y WHITE CLIP
GAMMA AMP
6dB UP
AGC
ALC
CLAMP
<Y0H+Y2H OUT>
S/H 1
S/H 2
WHITE BALANCE
BLUE WHITE BALANCE
RED WHITE BALANCE
CLIP
GAMMA CORRECTION
Q612 BUFFER
Q610 BUFFER
VR311 INDOOR W/B(R) ADJ
VR312 INDOOR W/B(B) ADJ
R-Y COLOUR PHASE
B-Y COLOUR PHASE
VR307
VR308
R-Y GC
B-Y GC
R-Y MATRIX
B-Y MATRIX
IC306
IC504
TO AWT
AWB STAGE
AWT SENSOR
REF.V
IC651
AMP
LOW ILLUMINATION DET
B601 B303
VR525 AWT OFFSET-R ADJ
VR526 AWT OFFSET-L ADJ
IC503
AWT R-GAIN ADJ
VR523
VR527 AWT B-GAIN ADJ
IC306
R-Y
B-Y
AWT OUTDOOR R-GAIN ADJ
VR529
VR528
AWT OUTDOOR B-GAIN ADJ
SW CONT
IC502
IC504
IC402
AWT H
OUTDOOR H
AWT CONT
SERIAL CLOCK
SERIAL DATA IN
(FROM IC6002-11)
(FROM IC6002-42)
STROBE
ELEC ZOOM/SHUTTER CONT
ELEC ZOOM H
FL303 FILTER
AUTO FOCUS STAGE
LESS THAN 0.7m
0.7m
5m
∞
68mm 48mm 34mm 24mm 11mm 8.5mm START OF MACRO MACRO
IC701
LED CONT
Q701
FOCUS1
FOCUS2
ZOOM0
ZOOM1
ZOOM2
FOCUS LENS
FOCUS LENS POSITION DETECTOR
ZOOM LENS POSITI DETECT
M

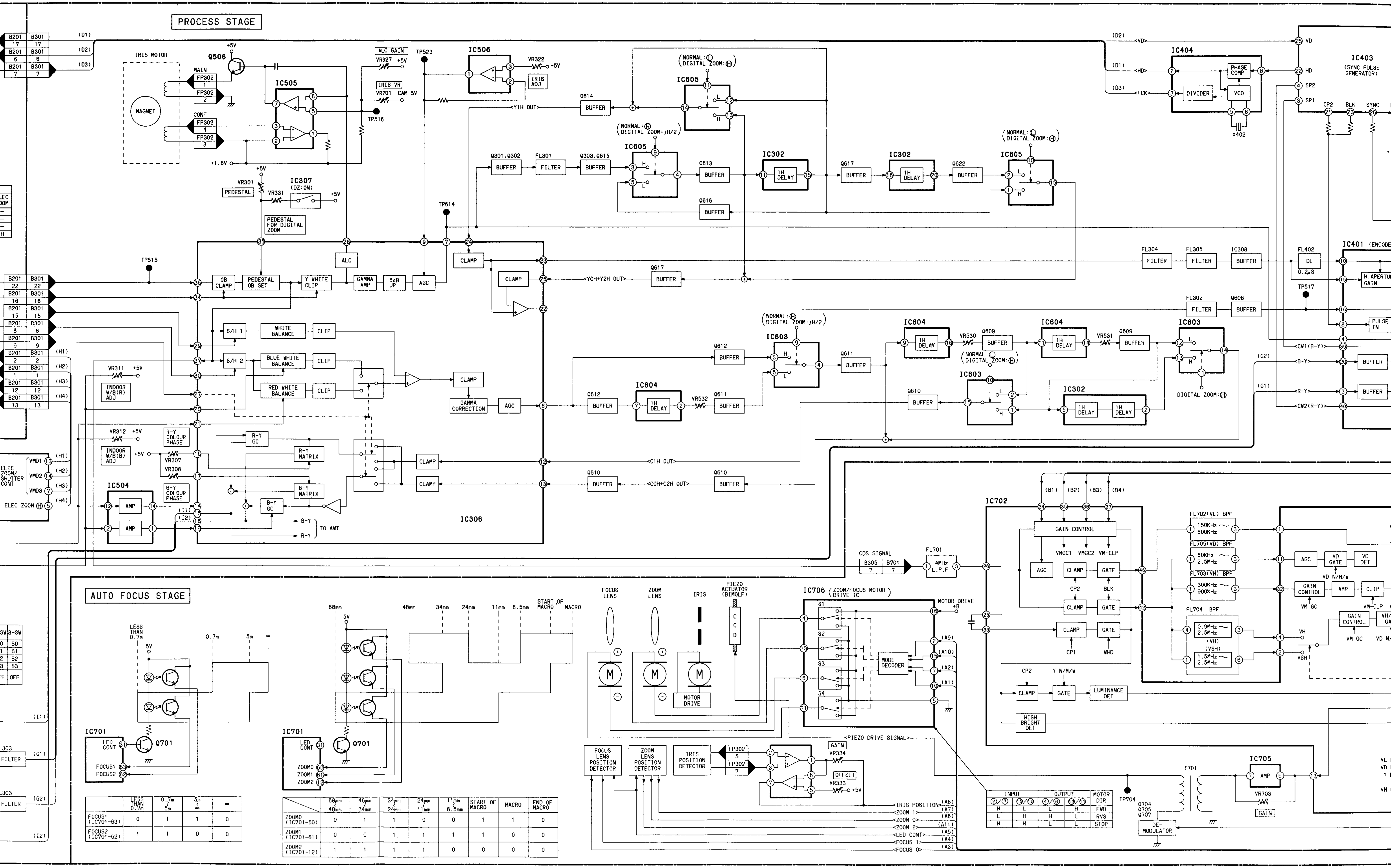
HIGH SPEED SHUTTER & ELE C ZOOM							
SHUTTER / SIG	1/50	1/100	1/250	1/500	1/1000	1/2000	ELEC ZOOM
VMD1	L	L	L	H	H	L	—
VMD2	L	L	H	L	H	H	—
VMD3	L	H	L	L	L	H	—
ELEC ZOOM Ⓗ	L	L	L	L	L	L	H

MODE	IC502 ⑥	IC502 ⑨	IC502 ⑩	R-SW	B-SW
INDOOR	L	L	L	R0	B0
OUTDOOR	L	L	H	R1	B1
AWT MODE	L	H	L	R2	B2
	L	H	H	R3	B3
LOW ILLUMI-NATION	H	—	—	OFF	OFF

	LESS THAN 0.7m	0.7m ~ 5m	5m ~ ∞	∞
FOCUS1 (IC701-63)	0	1	1	0
FOCUS2 (IC701-62)	1	1	0	0

	68mm ~ 48mm	48mm ~ 34mm	34mm ~ 24mm	24mm ~ 11mm	11mm ~ 8.5mm	START OF MACRO	MACRO	END OF MACRO
ZOOM0 (IC701-60)	0	1	1	0	0	1	1	0
ZOOM1 (IC701-61)	0	0	1	1	1	1	0	0
ZOOM2 (IC701-12)	1	1	1	1	0	0	0	0

Blockschaltbild des Kamerateiles
Camera Stage Block Diagram

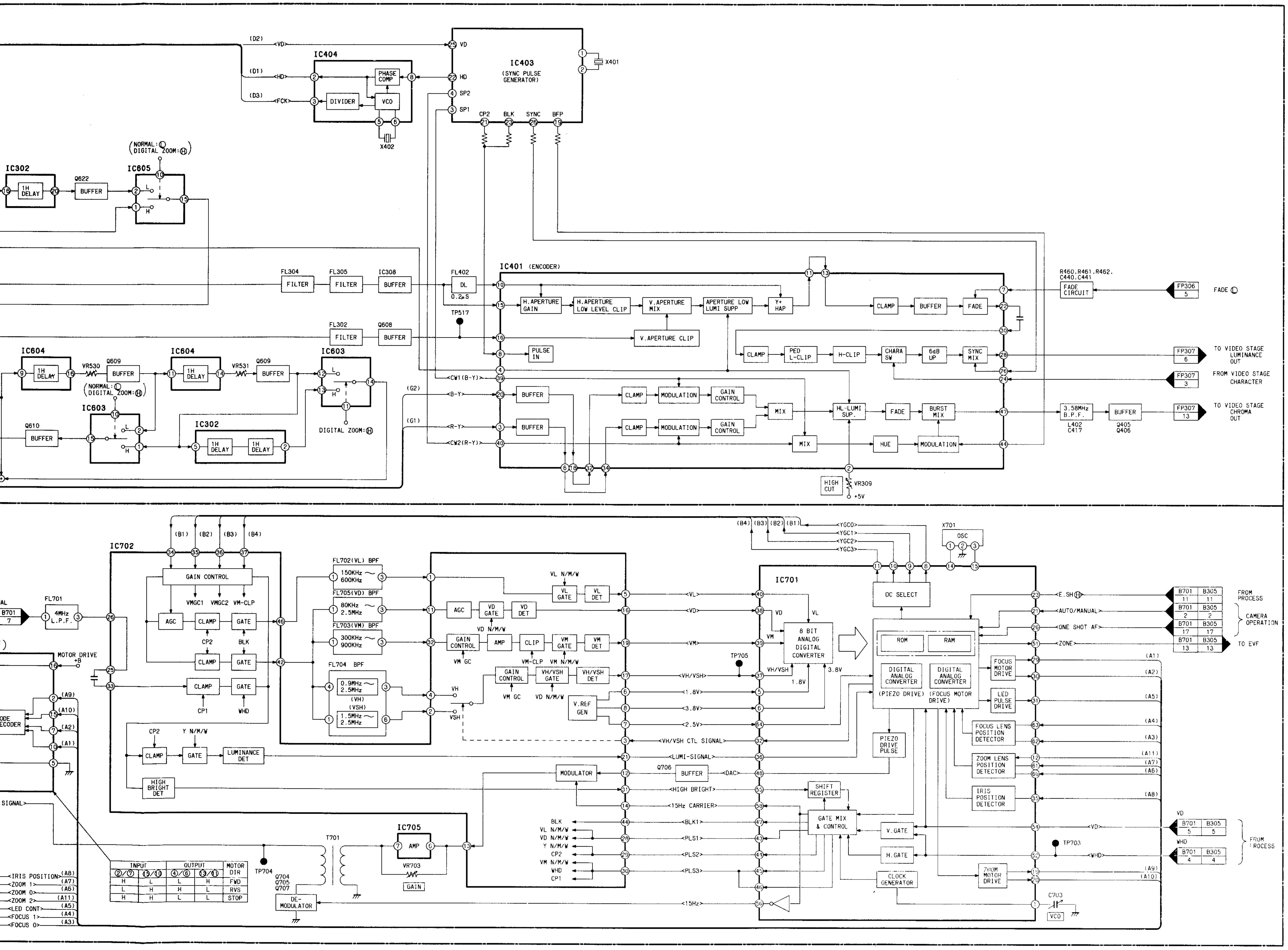

PROCESS STAGE
IRIS MOTOR
MAGNET
MAIN
CONT
FP302
Q506
IC505
ALC GAIN
VR327
IRIS VR
VR701
TP523
TP516
IC506
VR322
IRIS ADJ
IC605
(NORMAL: L DIGITAL ZOOM: H)
(NORMAL: H DIGITAL ZOOM: fH/2)
Q614
BUFFER
Y1H OUT
Q301.Q302
FL301
FILTER
Q303.Q615
Q613
Q616
IC302
1H DELAY
Q617
Q622
IC404
PHASE COMP
DIVIDER
VCO
X402
IC403
(SYNC PULSE GENERATOR)
VD
HD
SP2
SP1
CP2
BLK
SYNC
FCK
VR301
PEDESTAL
VR331
IC307
(DZ:ON)
PEDESTAL FOR DIGITAL ZOOM
TP614
TP515
ALC
CLAMP
OB CLAMP
PEDESTAL OB SET
Y WHITE CLIP
GAMMA AMP
6dB UP
AGC
Y0H+Y2H OUT
FL304
FL305
IC308
FL402
DL
0.2μS
TP517
IC401 (ENCODE
H.APERTURE GAIN
FL302
Q608
PULSE IN
S/H 1
S/H 2
WHITE BALANCE
BLUE WHITE BALANCE
RED WHITE BALANCE
CLIP
VR311
INDOOR W/B(R) ADJ
VR312
INDOOR W/B(B) ADJ
R-Y COLOUR PHASE
B-Y COLOUR PHASE
VR307
VR308
R-Y GC
B-Y GC
R-Y MATRIX
B-Y MATRIX
GAMMA CORRECTION
IC504
AMP
IC306
B-Y
R-Y
TO AWT
C1H OUT
C0H+C2H OUT
Q610
Q612
Q611
IC604
VR532
IC603
Q609
VR530
VR531
DIGITAL ZOOM: H
CW1(B-Y)
CW2(R-Y)
ELEC ZOOM/ SHUTTER CONT
VMD1
VMD2
VMD3
ELEC ZOOM
AUTO FOCUS STAGE
LESS THAN 0.7m
0.7m
5m
∞
IC701
LED CONT
Q701
FOCUS1
FOCUS2
68mm
48mm
34mm
24mm
11mm
8.5mm
START OF MACRO
MACRO
ZOOM0
ZOOM1
ZOOM2
FOCUS LENS
ZOOM LENS
IRIS
PIEZO ACTUATOR (BIMOLF)
CCD
MOTOR DRIVE
IC706 (ZOOM/FOCUS MOTOR DRIVE IC)
MODE DECODER
S1
S2
S3
S4
MOTOR DRIVE +B
PIEZO DRIVE SIGNAL
FOCUS LENS POSITION DETECTOR
ZOOM LENS POSITION DETECTOR
IRIS POSITION DETECTOR
GAIN
VR334
OFFSET
VR333
IRIS POSITION
ZOOM 1
ZOOM 0
ZOOM 2
LED CONT
FOCUS 1
FOCUS 0
CDS SIGNAL
B305
B701
FL701
4MHz L.P.F.
IC702
GAIN CONTROL
VMGC1
VMGC2
VM-CLP
GATE
CP1
WHD
Y N/M/W
LUMINANCE DET
HIGH BRIGHT DET
FL702(VL) BPF
150KHz 600KHz
FL705(VD) BPF
80KHz 2.5MHz
FL703(VM) BPF
300KHz 900KHz
FL704 BPF
0.9MHz 2.5MHz
(VH)
(VSH)
1.5MHz 2.5MHz
VD GATE
VD DET
VD N/M/W
VM GC
VH
VSH
TP704
Q704
Q705
Q707
DE-MODULATOR
T701
IC705
VR703

	LESS THAN 0.7m	0.7m ~ 5m	5m ~ ∞	∞
FOCUS1 (IC701-63)	0	1	1	0
FOCUS2 (IC701-62)	1	1	0	0

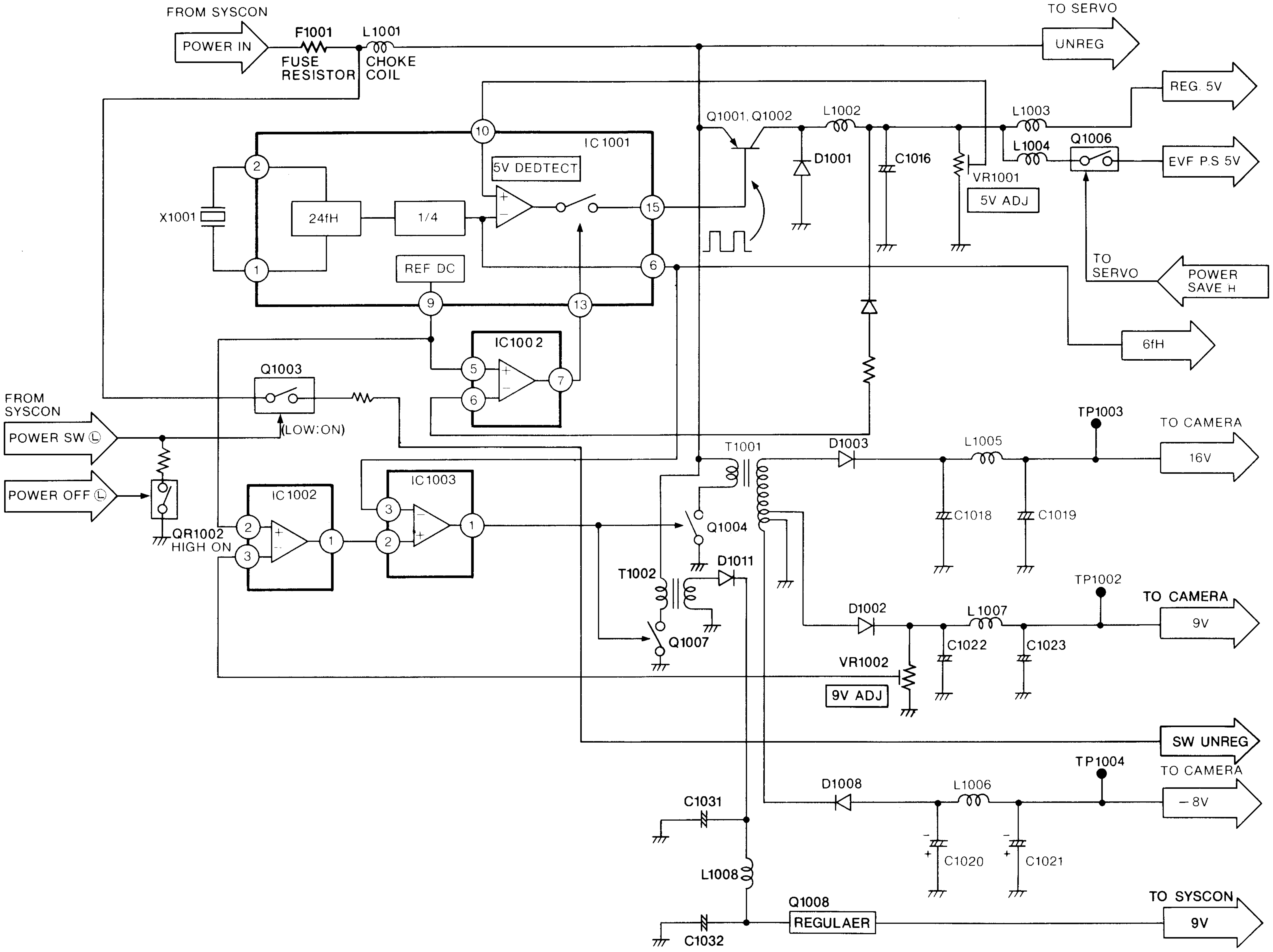
	68mm ~ 48mm	48mm ~ 34mm	34mm ~ 24mm	24mm ~ 11mm	11mm ~ 8.5mm	START OF MACRO	MACRO	END OF MACRO
ZOOM0 (IC701-60)	0	1	1	0	0	1	1	0
ZOOM1 (IC701-61)	0	0	1	1	1	1	0	0
ZOOM2 (IC701-12)	1	1	1	1	0	0	0	0

INPUT		OUTPUT		MOTOR DIR
②/⑦	⑮/⑩	④/⑥	⑬/⑪	
H	L	L	H	FWD
L	H	H	L	RVS
H	H	L	L	STOP

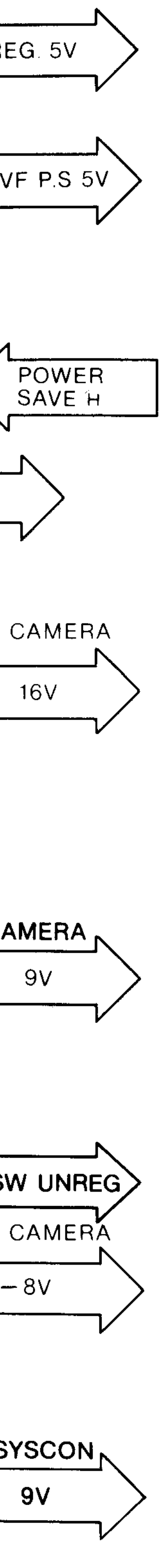
Blockschaltbild des Kamerateiles
Camera Stage Block Diagram


IC403
(SYNC PULSE GENERATOR)
VD
HD
SP2
SP1
CP2
BLK
SYNC
BFP
X401
IC404
PHASE COMP
VCO
DIVIDER
X402
(D2) <VD>
(D1) <HD>
(D3) <FCK>
(NORMAL: L, DIGITAL ZOOM: H)
IC302
1H DELAY
Q622
BUFFER
IC605
FL304
FILTER
FL305
FILTER
IC308
BUFFER
FL402
DL
0.2μS
TP517
FL302
FILTER
Q608
BUFFER
IC401 (ENCODER)
H.APERTURE GAIN
H.APERTURE LOW LEVEL CLIP
V.APERTURE MIX
APERTURE LOW LUMI SUPP
Y+HAP
CLAMP
BUFFER
FADE
V.APERTURE CLIP
PULSE IN
PED L-CLIP
H-CLIP
CHARA SW
6dB UP
SYNC MIX
MODULATION
GAIN CONTROL
MIX
HL-LUMI SUP.
BURST MIX
HUE
HIGH CUT
VR309
+5V
R460.R461.R462. C440.C441
FADE CIRCUIT
FP306 5
FADE L
FP307 6
TO VIDEO STAGE LUMINANCE OUT
FP307 3
FROM VIDEO STAGE CHARACTER
3.58MHz B.P.F.
L402 C417
BUFFER
Q405 Q406
FP307 13
TO VIDEO STAGE CHROMA OUT
IC604
1H DELAY
VR530
Q609
BUFFER
VR531
IC603
Q610
DIGITAL ZOOM: H
(G2) <B-Y>
(G1) <R-Y>
<CW1(B-Y)>
<CW2(R-Y)>
IC702
(B1) (B2) (B3) (B4)
GAIN CONTROL
VMGC1 VMGC2 VM-CLP
AGC
GATE
CP2
BLK
CP1
WHD
Y N/M/W
LUMINANCE DET
HIGH BRIGHT DET
FL701
4MHz L.P.F.
B701 7
MOTOR DRIVE +B
CODE DECODER
SIGNAL
FL702(VL) BPF 150KHz 600KHz
FL705(VD) BPF 80KHz 2.5MHz
FL703(VM) BPF 300KHz 900KHz
FL704 BPF
0.9MHz 2.5MHz (VH)
(VSH) 1.5MHz 2.5MHz
VL N/M/W
VL GATE
VL DET
VD GATE
VD DET
VD N/M/W
GAIN CONTROL
AMP
CLIP
VM GATE
VM DET
VM GC
VM-CLP
VM N/M/W
VH/VSH GATE
VH/VSH DET
V.REF GEN
VH
VSH
MODULATOR
IC705
AMP
VR703
GAIN
T701
TP704
Q704 Q705 Q707
DE-MODULATOR
BLK
VL N/M/W
VD N/M/W
Y N/M/W
CP2
VM N/M/W
WHD
CP1
<VL> <VD> <VM> <VH/VSH>
<1.8V> <3.8V> <2.5V>
<VH/VSH CTL SIGNAL>
<LUMI-SIGNAL>
Q706
BUFFER
<DAC>
<HIGH BRIGHT>
<15Hz CARRIER>
<BLK1> <PLS1> <PLS2> <PLS3>
<15Hz>
TP705
IC701
8 BIT ANALOG DIGITAL CONVERTER
3.8V
1.8V
<YGC0> <YGC1> <YGC2> <YGC3>
X701
OSC
DC SELECT
ROM
RAM
DIGITAL ANALOG CONVERTER (PIEZO DRIVE)
DIGITAL ANALOG CONVERTER (FOCUS MOTOR DRIVE)
FOCUS MOTOR DRIVE
LED PULSE DRIVE
FOCUS LENS POSITION DETECTOR
ZOOM LENS POSITION DETECTOR
IRIS POSITION DETECTOR
PIEZO DRIVE PULSE
SHIFT REGISTER
GATE MIX & CONTROL
V.GATE
H.GATE
CLOCK GENERATOR
ZOOM MOTOR DRIVE
C703
VCO
TP703
<E.SH H>
<AUTO/MANUAL>
<ONE SHOT AF>
<ZONE>
B701 11 B305 11
B701 2 B305 2
B701 17 B305 17
B701 13 B305 13
FROM PROCESS
CAMERA OPERATION
TO EVF
VD B701 5 B305 5
WHD B701 4 B305 4
FROM PROCESS
<VD> <WHD>
(A1) (A2) (A5) (A4) (A3) (A11) (A7) (A6) (A8) (A9) (A10)
<IRIS POSITION> <ZOOM 1> <ZOOM 0> <ZOOM 2> <LED CONT> <FOCUS 1> <FOCUS 0>
INPUT OUTPUT MOTOR DIR
H L L H FWD
L H H L RVS
H H L L STOP

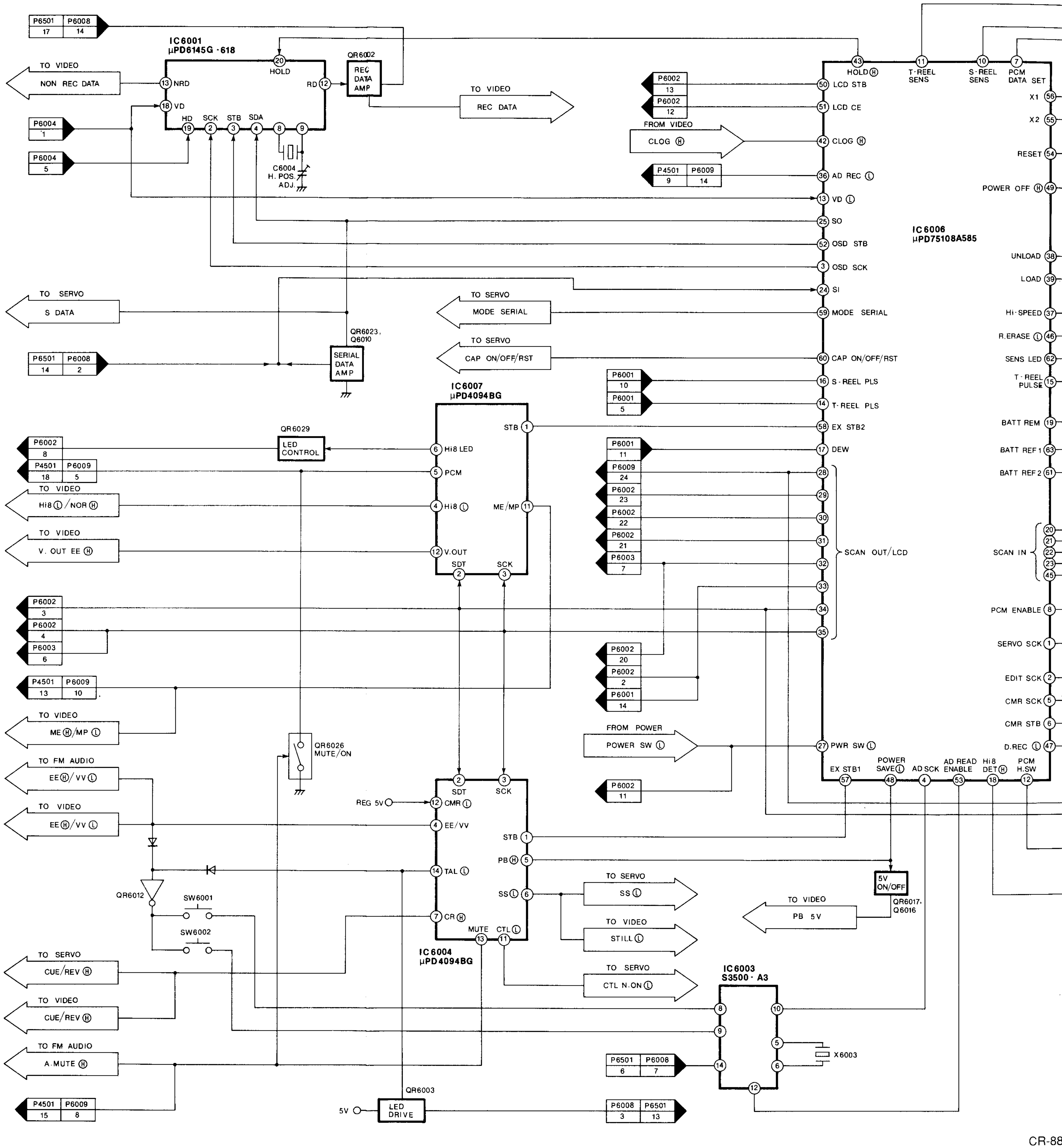
Blockschaltbild des Netzteiles
Power Supply Block Diagram


FROM SYSCON
POWER IN
F1001
FUSE RESISTOR
L1001
CHOKE COIL
TO SERVO
UNREG
REG. 5V
Q1001, Q1002
L1002
L1003
L1004
Q1006
EVF P.S 5V
D1001
C1016
VR1001
5V ADJ
IC 1001
5V DEDTECT
X1001
24fH
1/4
REF DC
TO SERVO
POWER SAVE H
6fH
IC1002
Q1003
FROM SYSCON
POWER SW Ⓛ
(LOW:ON)
POWER OFF Ⓛ
QR1002
HIGH ON
IC1002
IC1003
TP1003
TO CAMERA
16V
T1001
D1003
L1005
C1018
C1019
Q1004
D1011
T1002
Q1007
TP1002
TO CAMERA
9V
D1002
L1007
C1022
C1023
VR1002
9V ADJ
SW UNREG
TP1004
TO CAMERA
−8V
D1008
L1006
C1020
C1021
C1031
L1008
Q1008
REGULAER
TO SYSCON
9V
C1032

Blockschaltbild der Systemsteuerung
System Control Block Diagram

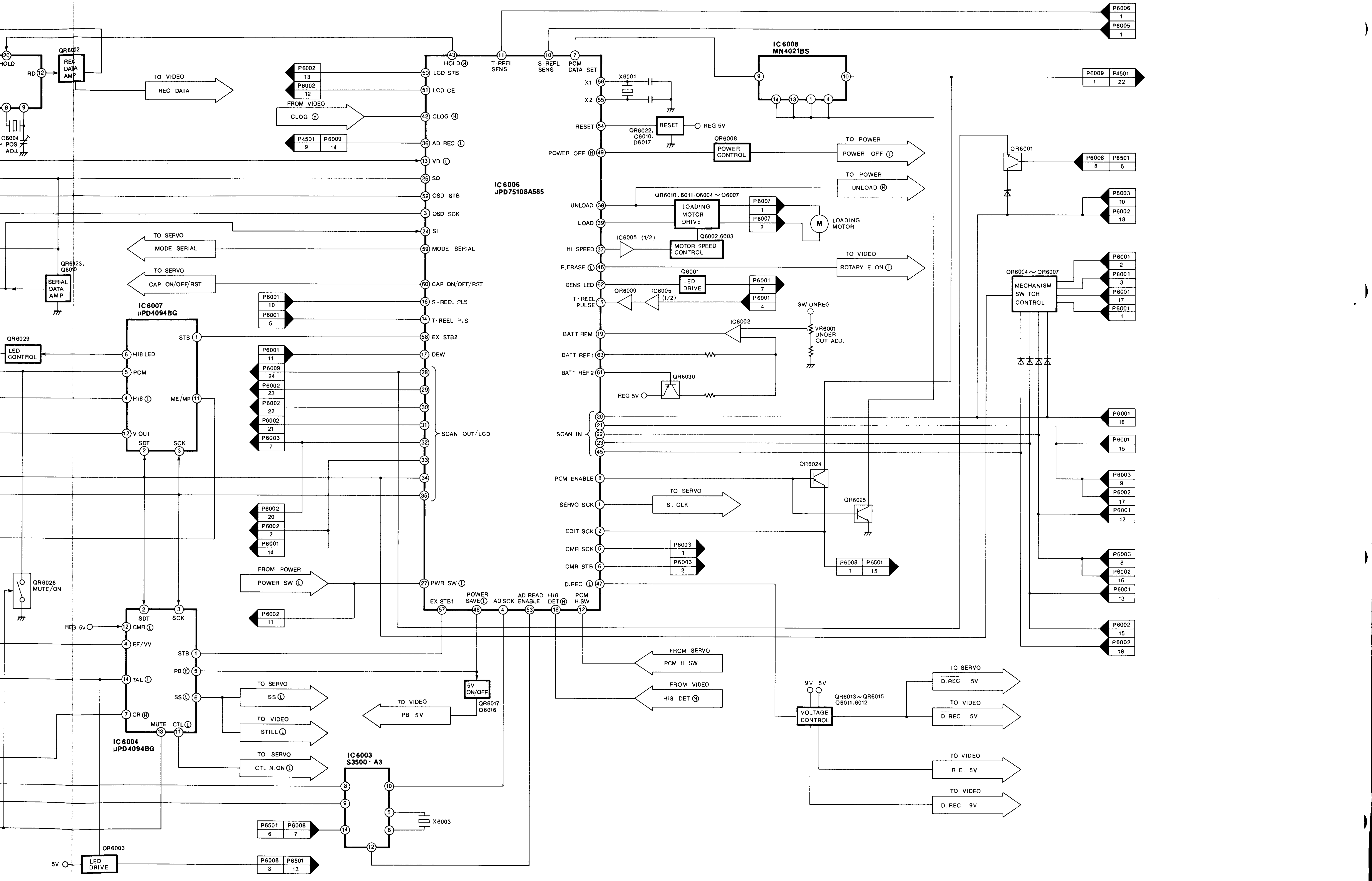


EG. 5V
VF P.S 5V
POWER SAVE H
CAMERA
16V
AMERA
9V
W UNREG
CAMERA
– 8V
SYSCON
9V



IC6001
μPD6145G -618
HOLD
NRD
VD
RD
HD
SCK
STB
SDA
QR6002
REC DATA AMP
TO VIDEO
NON REC DATA
TO VIDEO
REC DATA
C6004
H. POS. ADJ.
P6501 17
P6008 14
P6004 1
P6004 5
TO SERVO
S DATA
QR6023, Q6010
SERIAL DATA AMP
P6501 14
P6008 2
TO SERVO
MODE SERIAL
TO SERVO
CAP ON/OFF/RST
IC6007
μPD4094BG
STB
Hi8 LED
PCM
Hi8 Ⓛ
ME/MP
V.OUT
SDT
SCK
QR6029
LED CONTROL
P6002 8
P4501 18
P6009 5
TO VIDEO
Hi8 Ⓛ/NOR Ⓗ
TO VIDEO
V. OUT EE Ⓗ
P6002 3
P6002 4
P6003 6
P4501 13
P6009 10
TO VIDEO
ME Ⓗ/MP Ⓛ
QR6026
MUTE/ON
TO FM AUDIO
EE Ⓗ/VV Ⓛ
TO VIDEO
EE Ⓗ/VV Ⓛ
QR6012
SW6001
SW6002
REG 5V
IC6004
μPD4094BG
SDT
SCK
CMR Ⓛ
EE/VV
TAL Ⓛ
CR Ⓗ
STB
PB Ⓗ
SS Ⓛ
MUTE
CTL Ⓛ
TO SERVO
SS Ⓛ
TO VIDEO
STILL Ⓛ
TO SERVO
CTL N.ON Ⓛ
TO SERVO
CUE/REV Ⓗ
TO VIDEO
CUE/REV Ⓗ
TO FM AUDIO
A.MUTE Ⓗ
P4501 15
P6009 8
5V
QR6003
LED DRIVE
P6008 3
P6501 13
P6501 6
P6008 7
IC6003
S3500 - A3
X6003
TO VIDEO
PB 5V
5V ON/OFF
QR6017, Q6016
FROM POWER
POWER SW Ⓛ
P6002 11
P6002 13
P6002 12
FROM VIDEO
CLOG Ⓗ
P4501 9
P6009 14
P6001 10
P6001 5
P6001 11
P6009 24
P6002 23
P6002 22
P6002 21
P6003 7
P6002 20
P6002 2
P6001 14
IC6006
μPD75108A585
HOLD Ⓗ
T-REEL SENS
S-REEL SENS
PCM DATA SET
LCD STB
LCD CE
CLOG Ⓗ
AD REC Ⓛ
VD Ⓛ
SO
OSD STB
OSD SCK
SI
MODE SERIAL
CAP ON/OFF/RST
S-REEL PLS
T-REEL PLS
EX STB2
DEW
SCAN OUT/LCD
PWR SW Ⓛ
EX STB1
POWER SAVE Ⓛ
AD SCK
AD READ ENABLE
Hi8 DET Ⓗ
PCM H.SW
X1
X2
RESET
POWER OFF Ⓗ
UNLOAD
LOAD
Hi-SPEED
R.ERASE Ⓛ
SENS LED
T-REEL PULSE
BATT REM
BATT REF 1
BATT REF 2
SCAN IN
PCM ENABLE
SERVO SCK
EDIT SCK
CMR SCK
CMR STB
D.REC Ⓛ

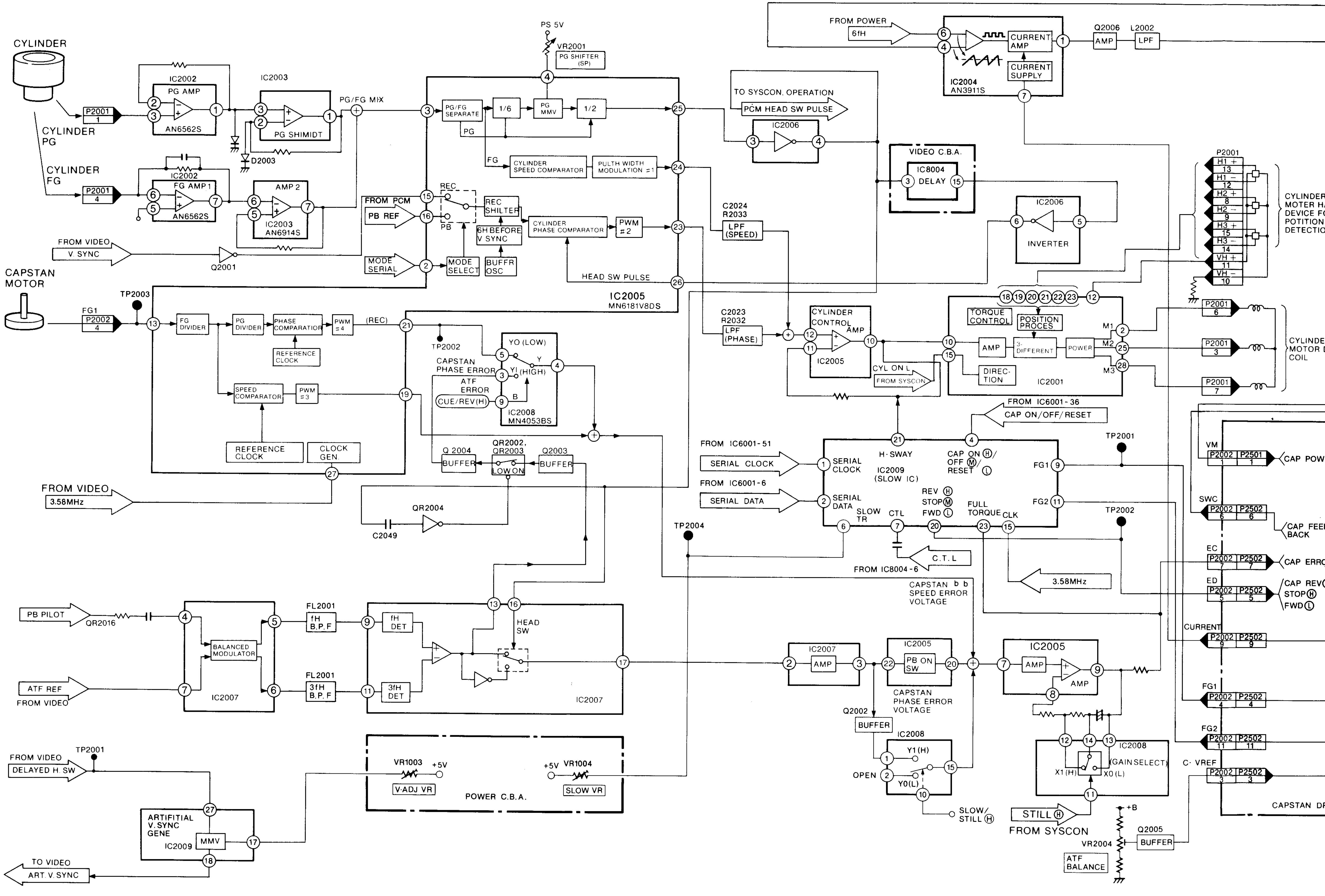
Blockschaltbild der Systemsteuerung
System Control Block Diagram



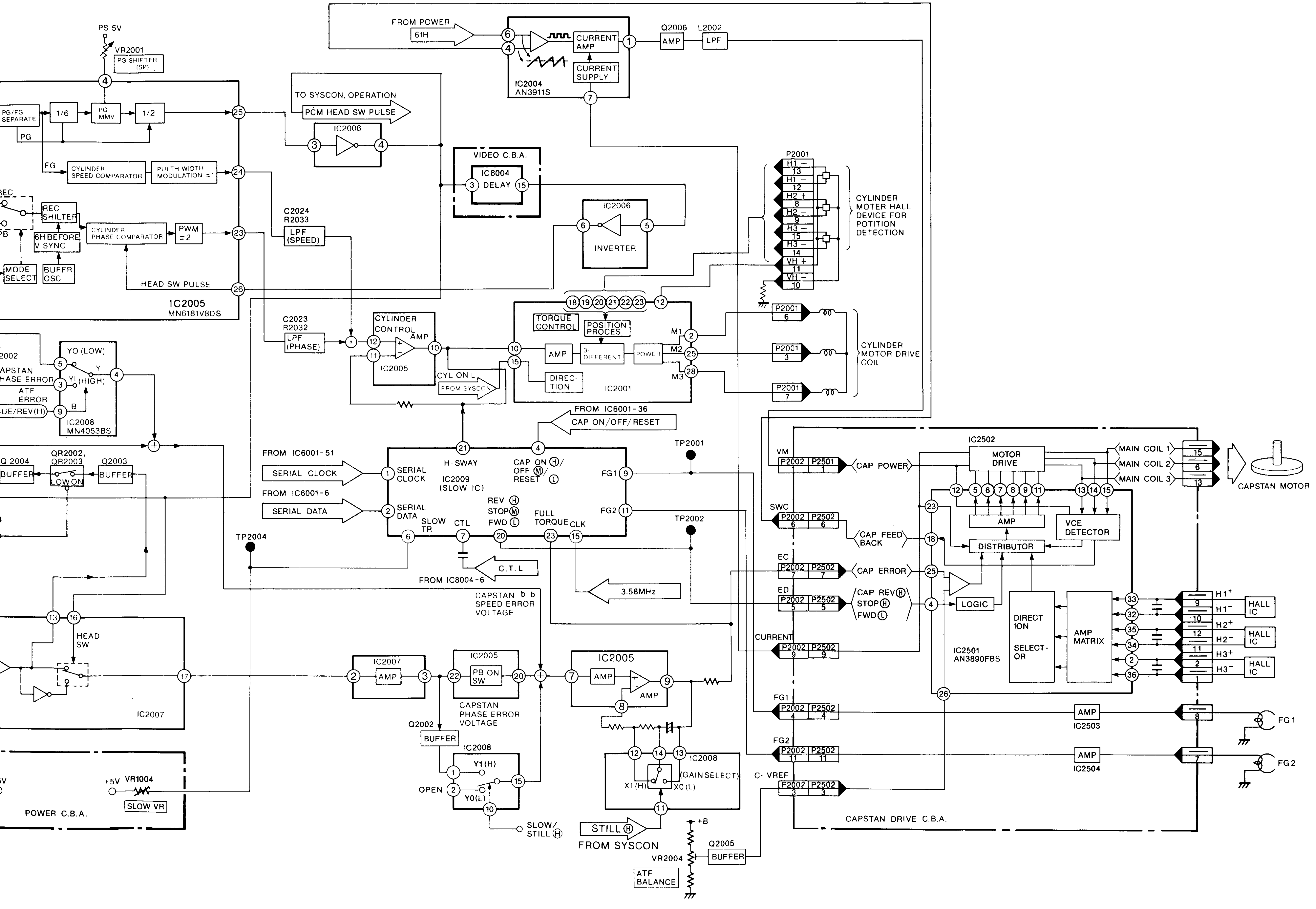
P6006 1
P6005 1
HOLD
RD
QR6002
REC DATA AMP
TO VIDEO
REC DATA
P6002 13
P6002 12
FROM VIDEO
CLOG Ⓗ
P4501 9
P6009 14
C6004
H. POS. ADJ.
QR6023, Q6010
SERIAL DATA AMP
TO SERVO
MODE SERIAL
TO SERVO
CAP ON/OFF/RST
P6001 10
P6001 5
P6001 11
P6009 24
P6002 23
P6002 22
P6002 21
P6003 7
P6002 20
P6002 2
P6001 14
IC6007
μPD4094BG
STB
Hi8 LED
PCM
Hi8 Ⓛ
ME/MP
V.OUT
SDT
SCK
QR6029
LED CONTROL
QR6026 MUTE/ON
REG 5V
CMR Ⓛ
EE/VV
TAL Ⓛ
CR Ⓗ
MUTE
CTL Ⓛ
PB Ⓗ
SS Ⓛ
IC6004
μPD4094BG
QR6003
5V
LED DRIVE
FROM POWER
POWER SW Ⓛ
P6002 11
TO SERVO
SS Ⓛ
TO VIDEO
STILL Ⓛ
TO SERVO
CTL N.ON Ⓛ
TO VIDEO
PB 5V
5V ON/OFF
QR6017, Q6016
P6501 6
P6008 7
P6008 3
P6501 13
IC6003
S3500 - A3
X6003
IC6006
μPD75108A585
HOLD Ⓗ
T-REEL SENS
S-REEL SENS
PCM DATA SET
LCD STB
LCD CE
CLOG Ⓗ
AD REC Ⓛ
VD Ⓛ
SO
OSD STB
OSD SCK
SI
MODE SERIAL
CAP ON/OFF/RST
S-REEL PLS
T-REEL PLS
EX STB2
DEW
SCAN OUT/LCD
PWR SW Ⓛ
EX STB1
POWER SAVE Ⓛ
AD SCK
AD READ ENABLE
Hi8 DET Ⓗ
PCM H.SW
X6001
X1
X2
RESET
QR6022, C6010, D6017
RESET
REG 5V
POWER OFF Ⓗ
QR6008
POWER CONTROL
TO POWER
POWER OFF Ⓛ
TO POWER
UNLOAD Ⓗ
UNLOAD
LOAD
QR6010, 6011, Q6004 ~ Q6007
LOADING MOTOR DRIVE
P6007 1
P6007 2
M
LOADING MOTOR
Hi-SPEED
IC6005 (1/2)
Q6002, 6003
MOTOR SPEED CONTROL
TO VIDEO
ROTARY E. ON Ⓛ
R. ERASE Ⓛ
SENS LED
Q6001
LED DRIVE
P6001 7
T-REEL PULSE
QR6009
IC6005 (1/2)
P6001 4
SW UNREG
BATT REM
IC6002
VR6001 UNDER CUT ADJ.
BATT REF 1
BATT REF 2
QR6030
REG 5V
SCAN IN
PCM ENABLE
QR6024
QR6025
SERVO SCK
TO SERVO
S. CLK
EDIT SCK
CMR SCK
P6003 1
CMR STB
P6003 2
D.REC Ⓛ
P6008 1
P6501 15
FROM SERVO
PCM H. SW
FROM VIDEO
Hi8 DET Ⓗ
IC6008
MN4021BS
P6009 1
P4501 22
QR6001
P6008 8
P6501 5
P6003 10
P6002 18
QR6004 ~ QR6007
MECHANISM SWITCH CONTROL
P6001 2
P6001 3
P6001 17
P6001 1
P6001 16
P6001 15
P6003 9
P6002 17
P6001 12
P6003 8
P6002 16
P6001 13
P6002 15
P6002 19
9V
5V
QR6013 ~ QR6015
Q6011, 6012
VOLTAGE CONTROL
TO SERVO
D.REC 5V
TO VIDEO
D.REC 5V
TO VIDEO
R.E. 5V
TO VIDEO
D.REC 9V

Blockschaltbild des Servoteiles
Servo Block Diagram

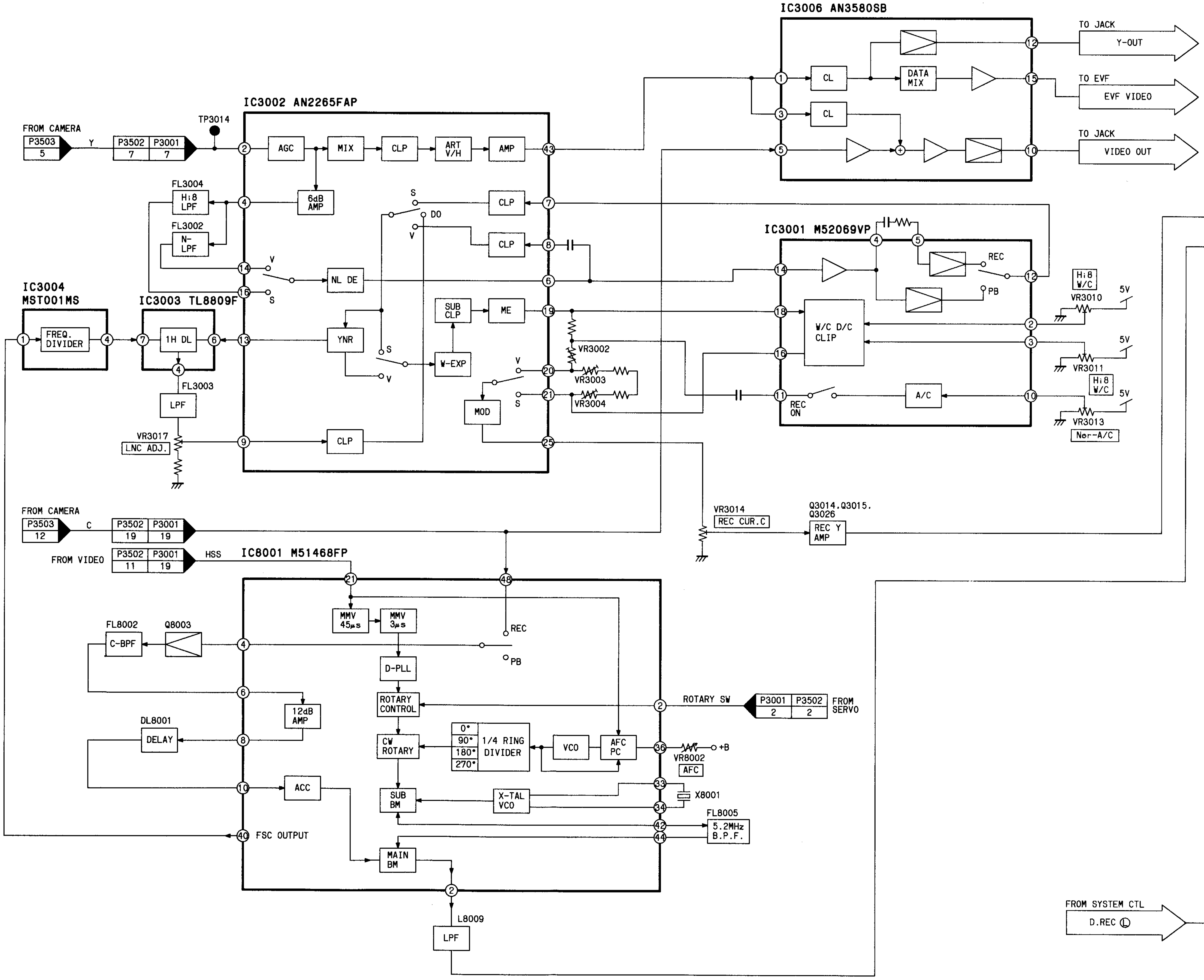
Blockscha
Servo Blo


CYLINDER
CYLINDER PG
CYLINDER FG
P2001 1
P2001 4
IC2002
PG AMP
AN6562S
IC2002
FG AMP1
AN6562S
IC2003
PG SHIMIDT
AMP 2
IC2003
AN6914S
D2003
PG/FG MIX
PS 5V
VR2001
PG SHIFTER (SP)
PG/FG SEPARATE
1/6
PG MMV
1/2
PG
FG
CYLINDER SPEED COMPARATOR
PULTH WIDTH MODULATION ≠1
REC
PB
FROM PCM
PB REF
REC SHILTER
6H BEFORE V SYNC
CYLINDER PHASE COMPARATOR
PWM ≠2
MODE SERIAL
MODE SELECT
BUFFR OSC
HEAD SW PULSE
FROM VIDEO
V. SYNC
Q2001
CAPSTAN MOTOR
TP2003
FG1
P2002 4
FG DIVIDER
PG DIVIDER
PHASE COMPARATOR
REFERENCE CLOCK
PWM ≠4
(REC)
SPEED COMPARATOR
PWM ≠3
REFERENCE CLOCK
CLOCK GEN
IC2005
MN6181V8DS
TP2002
CAPSTAN PHASE ERROR
ATF ERROR
CUE/REV(H)
Y0 (LOW)
Y1 (HIGH)
Y
B
IC2008
MN4053BS
Q 2004
BUFFER
QR2002, QR2003
LOW ON
Q2003
BUFFER
QR2004
C2049
FROM VIDEO
3.58MHz
TO SYSCON. OPERATION
PCM HEAD SW PULSE
IC2006
VIDEO C.B.A.
IC8004
DELAY
IC2006
INVERTER
C2024
R2033
LPF (SPEED)
C2023
R2032
LPF (PHASE)
CYLINDER CONTROL AMP
IC2005
CYL ON L
FROM SYSCON
FROM POWER
6fH
CURRENT AMP
CURRENT SUPPLY
IC2004
AN3911S
Q2006
AMP
L2002
LPF
P2001
H1 + 13
H1 − 12
H2 + 8
H2 − 9
H3 + 15
H3 − 14
VH + 11
VH − 10
CYLINDER MOTER HA DEVICE FO POTITION DETECTIO
TORQUE CONTROL
POSITION PROCES
AMP
3-DIFFERENT
POWER
DIRECTION
IC2001
M1
M2
M3
P2001 6
P2001 3
P2001 7
CYLINDE MOTOR D COIL
FROM IC6001-36
CAP ON/OFF/RESET
FROM IC6001-51
SERIAL CLOCK
FROM IC6001-6
SERIAL DATA
SERIAL CLOCK
SERIAL DATA
H-SWAY
IC2009
(SLOW IC)
CAP ON (H)/ OFF (M)/ RESET (L)
REV (H)
STOP(M)
FWD (L)
FULL TORQUE
CLK
SLOW TR
CTL
FG1
FG2
TP2001
TP2002
TP2004
C.T.L
FROM IC8004-6
3.58MHz
VM
P2002 1
P2501 1
CAP POW
SWC
P2002 6
P2502 6
CAP FEED BACK
EC
P2002 7
P2502 7
CAP ERRO
ED
P2002 5
P2502 5
CAP REV STOP(H) FWD(L)
CURRENT
P2002 9
P2502 9
FG1
P2002 4
P2502 4
FG2
P2002 11
P2502 11
C· VREF
P2002 3
P2502 3
CAPSTAN DR
CAPSTAN SPEED ERROR VOLTAGE
PB PILOT
QR2016
BALANCED MODULATOR
ATF REF
FROM VIDEO
IC2007
FL2001
fH B.P.F
FL2001
3fH B.P.F
fH DET
3fH DET
HEAD SW
IC2007
IC2007
AMP
IC2005
PB ON SW
CAPSTAN PHASE ERROR VOLTAGE
IC2005
AMP
AMP
Q2002
BUFFER
IC2008
Y1(H)
Y0(L)
OPEN
SLOW/ STILL (H)
STILL (H)
FROM SYSCON
IC2008
(GAIN SELECT)
X1 (H)
X0 (L)
+B
VR2004
Q2005
BUFFER
ATF BALANCE
FROM VIDEO DELAYED H. SW
TP2001
ARTIFITIAL V.SYNC GENE
MMV
IC2009
TO VIDEO
ART. V. SYNC
VR1003
+5V
V·ADJ VR
POWER C.B.A.
+5V
VR1004
SLOW VR

Blockschaltbild des Servoteiles
Servo Block Diagram

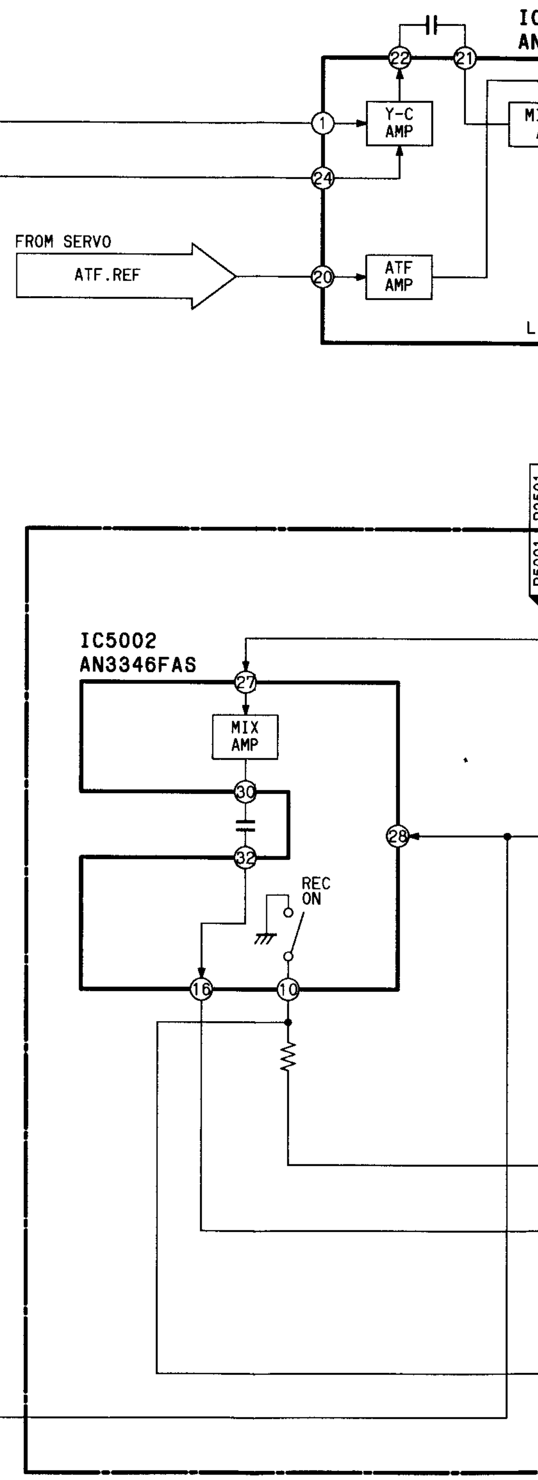

PS 5V
VR2001
PG SHIFTER (SP)
PG/FG SEPARATE
1/6
PG MMV
1/2
PG
FG
CYLINDER SPEED COMPARATOR
PULTH WIDTH MODULATION #1
REC
PB
REC SHILTER
6H BEFORE V SYNC
CYLINDER PHASE COMPARATOR
PWM #2
MODE SELECT
BUFFR OSC
HEAD SW PULSE
IC2005
MN6181V8DS
TO SYSCON, OPERATION
PCM HEAD SW PULSE
IC2006
FROM POWER
6fH
CURRENT AMP
CURRENT SUPPLY
IC2004
AN3911S
Q2006
L2002
AMP
LPF
VIDEO C.B.A.
IC8004
DELAY
INVERTER
C2024
R2033
LPF (SPEED)
C2023
R2032
LPF (PHASE)
CYLINDER CONTROL AMP
CYL ON L
FROM SYSCON
TORQUE CONTROL
POSITION PROCES
3-DIFFERENT
POWER
DIREC-TION
IC2001
M1
M2
M3
P2001
H1 +
H1 −
H2 +
H2 −
H3 +
H3 −
VH +
VH −
CYLINDER MOTER HALL DEVICE FOR POTITION DETECTION
CYLINDER MOTOR DRIVE COIL
YO (LOW)
Y1 (HIGH)
CAPSTAN PHASE ERROR
ATF ERROR
IC2008
MN4053BS
Q 2004
QR2002, QR2003
Q2003
BUFFER
LOW ON
FROM IC6001-36
CAP ON/OFF/RESET
FROM IC6001-51
SERIAL CLOCK
FROM IC6001-6
SERIAL DATA
H-SWAY
IC2009
(SLOW IC)
CAP ON Ⓗ/ OFF Ⓜ/ RESET Ⓛ
REV Ⓗ
STOP Ⓜ
FWD Ⓛ
SLOW TR
CTL
FULL TORQUE
CLK
FG1
FG2
TP2001
TP2002
TP2004
C.T.L
FROM IC8004-6
3.58MHz
CAPSTAN b b SPEED ERROR VOLTAGE
HEAD SW
IC2007
AMP
IC2005
PB ON SW
CAPSTAN PHASE ERROR VOLTAGE
Q2002
BUFFER
IC2008
Y1(H)
Y0(L)
OPEN
SLOW/ STILL Ⓗ
X1(H)
X0(L)
GAIN SELECT
STILL Ⓗ
FROM SYSCON
+B
Q2005
BUFFER
VR2004
ATF BALANCE
+5V
VR1004
SLOW VR
POWER C.B.A.
IC2502
MOTOR DRIVE
AMP
VCE DETECTOR
DISTRIBUTOR
LOGIC
DIRECT-ION SELECT-OR
AMP MATRIX
IC2501
AN3890FBS
VM
SWC
EC
ED
CURRENT
FG1
FG2
C· VREF
P2002
P2501
P2502
CAP POWER
CAP FEED BACK
CAP ERROR
CAP REV Ⓗ
STOP Ⓗ
FWD Ⓛ
MAIN COIL 1
MAIN COIL 2
MAIN COIL 3
CAPSTAN MOTOR
H1+
H1−
H2+
H2−
H3+
H3−
HALL IC
IC2503
IC2504
CAPSTAN DRIVE C.B.A.

Blockschaltbild des Luminanz-und Farbteiles (Aufnahme)
Luminance and Chrominance Block Diagram (Recording)



IC3006 AN3580SB
CL
DATA MIX
CL
TO JACK
Y-OUT
TO EVF
EVF VIDEO
TO JACK
VIDEO OUT
IC3002 AN2265FAP
TP3014
FROM CAMERA
P3503
5
Y
P3502
7
P3001
7
AGC
MIX
CLP
ART V/H
AMP
FL3004
Hi8 LPF
6dB AMP
FL3002
N-LPF
CLP
CLP
S
DO
V
NL DE
SUB CLP
ME
YNR
W-EXP
MOD
CLP
IC3004
MST001MS
FREQ. DIVIDER
IC3003 TL8809F
1H DL
FL3003
LPF
VR3017
LNC ADJ.
VR3002
VR3003
VR3004
IC3001 M52069VP
REC
PB
W/C D/C CLIP
A/C
REC ON
Hi8 W/C
VR3010
5V
VR3011
Hi8 W/C
VR3013
Nor-A/C
VR3014
REC CUR.C
Q3014.Q3015.
Q3026
REC Y AMP
FROM CAMERA
P3503
12
C
P3502
19
P3001
19
FROM VIDEO
P3502
11
P3001
19
HSS
IC8001 M51468FP
MMV 45μs
MMV 3μs
D-PLL
ROTARY CONTROL
CW ROTARY
0°
90°
180°
270°
1/4 RING DIVIDER
VCO
AFC PC
SUB BM
X-TAL VCO
MAIN BM
FL8002
Q8003
C-BPF
12dB AMP
DL8001
DELAY
ACC
FSC OUTPUT
ROTARY SW
P3001
2
P3502
2
FROM SERVO
VR8002
AFC
+B
X8001
FL8005
5.2MHz B.P.F.
L8009
LPF
FROM SYSTEM CTL
D.REC Ⓛ

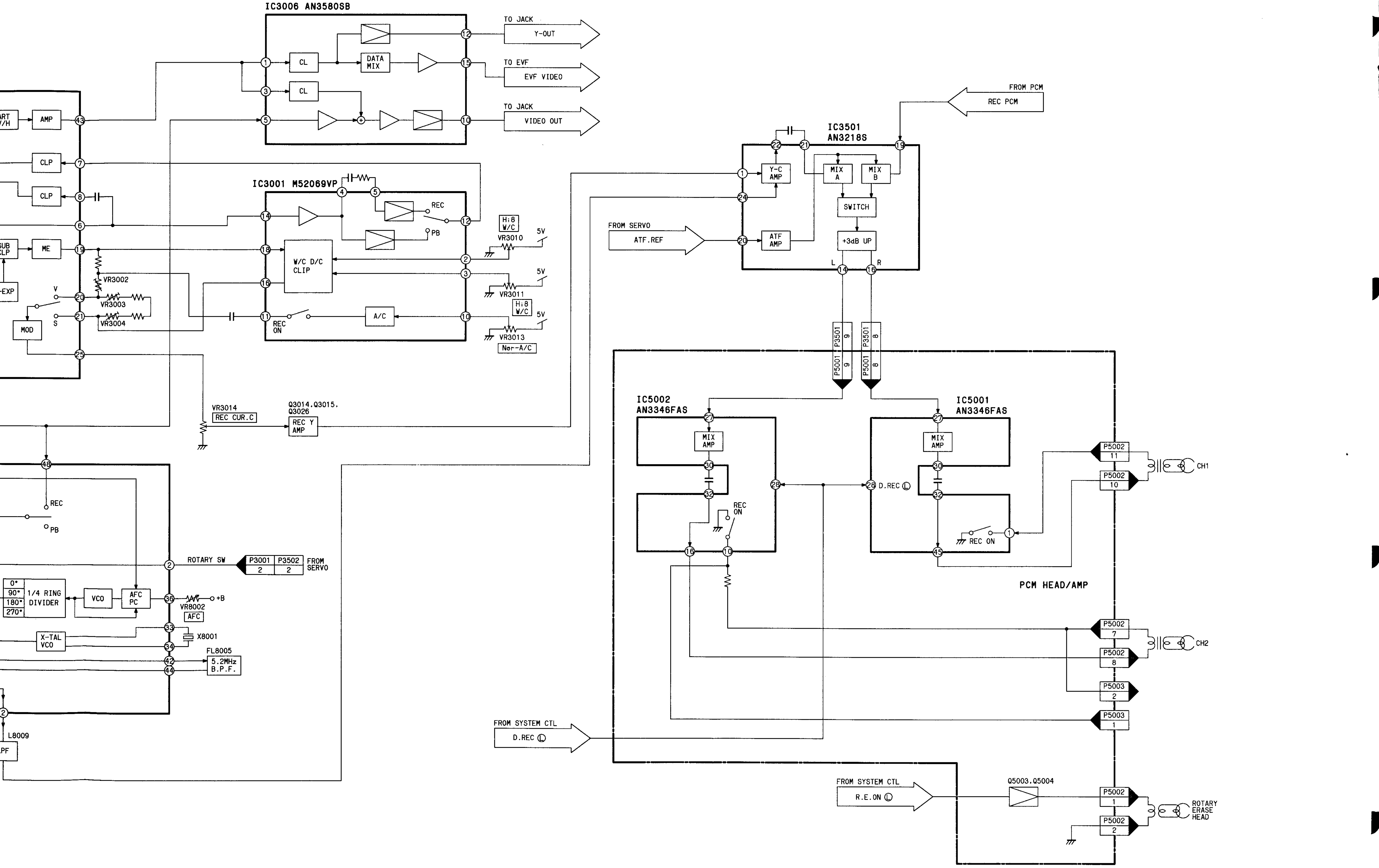
Blockschaltbil
Luminance an



IC
AN
Y-C AMP
FROM SERVO
ATF.REF
ATF AMP
IC5002
AN3346FAS
MIX AMP
REC ON

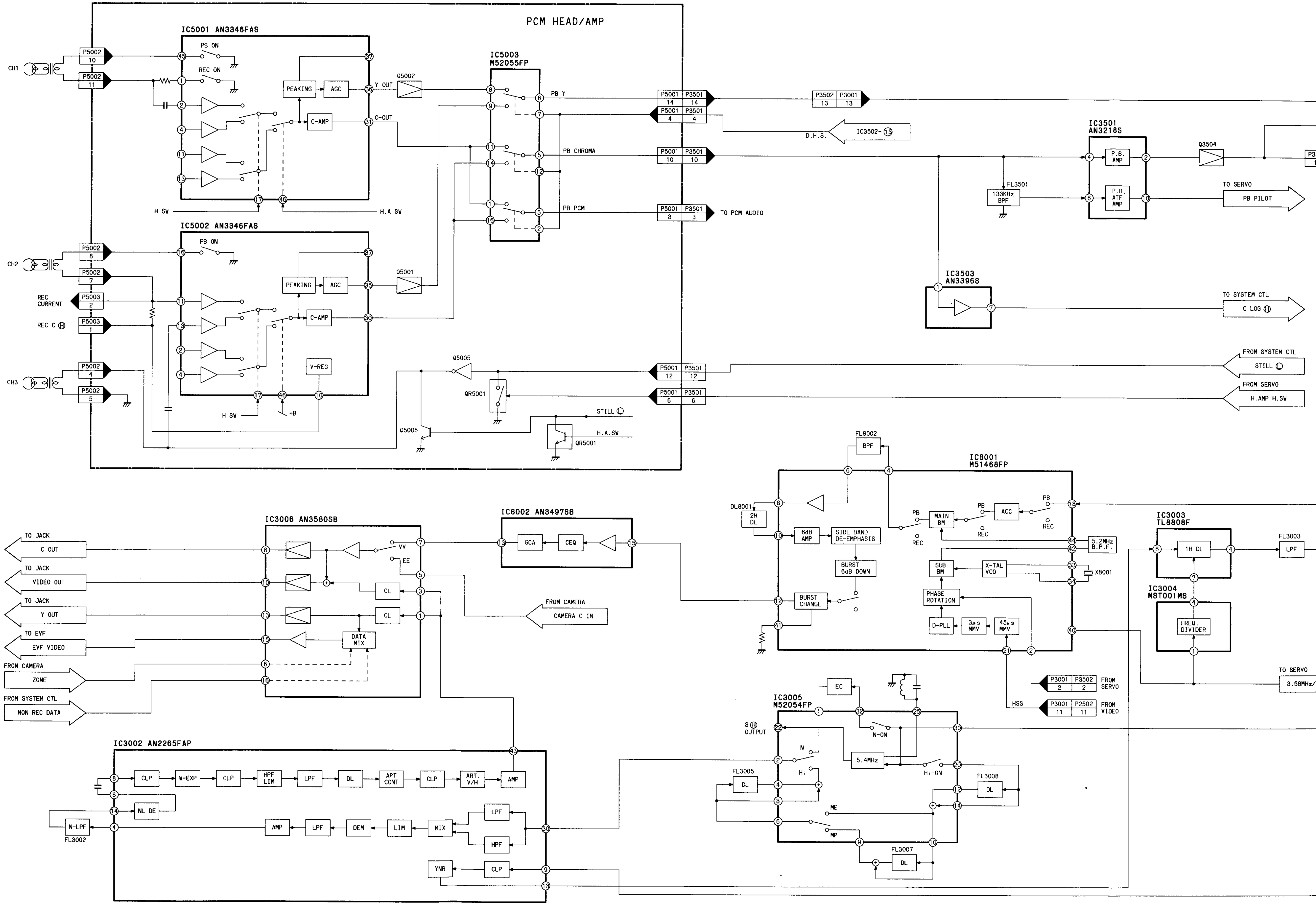
me)
ng)

Blockschaltbild des Luminanz-und Farbteiles (Aufnahme)
Luminance and Chrominance Block Diagram (Recording)


IC3006 AN3580SB
CL
CL
DATA MIX
TO JACK
Y-OUT
TO EVF
EVF VIDEO
TO JACK
VIDEO OUT
ART V/H
AMP
CLP
CLP
SUB CLP
ME
EXP
MOD
V
S
VR3002
VR3003
VR3004
IC3001 M52069VP
REC
PB
W/C D/C CLIP
A/C
REC ON
Hi8 W/C
VR3010
5V
VR3011
Hi8 W/C
VR3013
Nor-A/C
VR3014
REC CUR.C
Q3014.Q3015. Q3026
REC Y AMP
REC
PB
ROTARY SW
P3001 2
P3502 2
FROM SERVO
0° 90° 180° 270°
1/4 RING DIVIDER
VCO
AFC PC
VR8002
AFC
+B
X-TAL VCO
X8001
FL8005
5.2MHz B.P.F.
L8009
PF
FROM PCM
REC PCM
IC3501 AN3218S
Y-C AMP
MIX A
MIX B
SWITCH
FROM SERVO
ATF.REF
ATF AMP
+3dB UP
L
R
P3501 9
P3501 8
P5001 9
P5001 8
IC5002 AN3346FAS
MIX AMP
REC ON
IC5001 AN3346FAS
MIX AMP
D.REC Ⓛ
REC ON
P5002 11
P5002 10
CH1
PCM HEAD/AMP
P5002 7
P5002 8
CH2
P5003 2
P5003 1
FROM SYSTEM CTL
D.REC Ⓛ
FROM SYSTEM CTL
R.E.ON Ⓛ
Q5003.Q5004
P5002 1
P5002 2
ROTARY ERASE HEAD

Blockschaltbild des Luminanz-und Farbteiles (Wiedergabe)
Luminance and Chrominance Block Diagram (Playback)

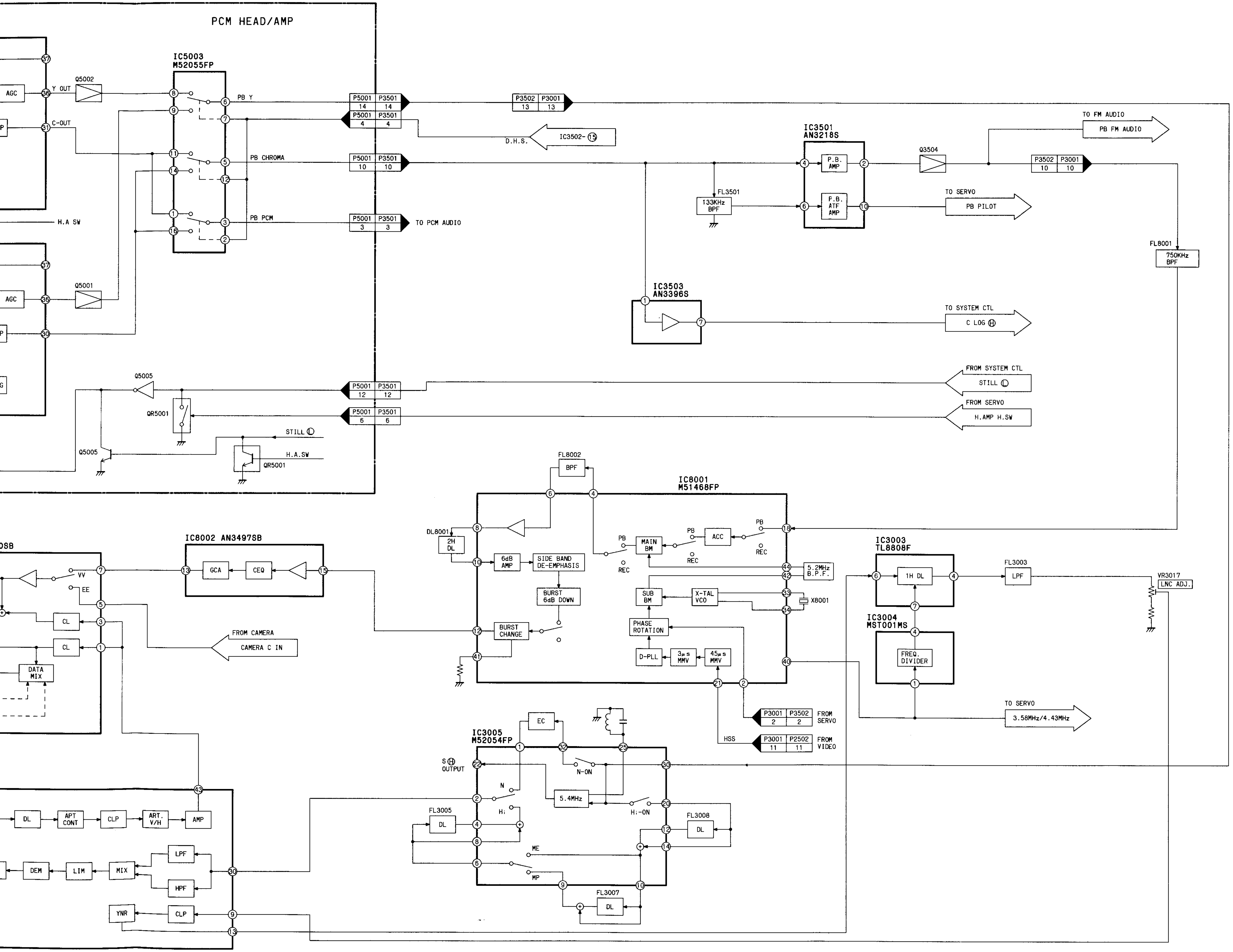
Blockschaltbild des Lum
Luminance and Chromir



PCM HEAD/AMP
IC5001 AN3346FAS
IC5002 AN3346FAS
IC5003 M52055FP
CH1
CH2
CH3
P5002
P5003
REC CURRENT
REC C Ⓗ
PB ON
REC ON
PEAKING
AGC
C-AMP
V-REG
Y OUT
C-OUT
Q5002
Q5001
Q5005
QR5001
Q5005
H SW
H.A SW
+B
STILL Ⓛ
H.A.SW
PB Y
PB CHROMA
PB PCM
P5001
P3501
P3502
P3001
TO PCM AUDIO
D.H.S.
IC3502-⑮
IC3501 AN3218S
P.B. AMP
P.B. ATF AMP
Q3504
FL3501
133KHz BPF
TO SERVO
PB PILOT
IC3503 AN3396S
TO SYSTEM CTL
C LOG Ⓗ
FROM SYSTEM CTL
STILL Ⓛ
FROM SERVO
H.AMP H.SW
FL8002
BPF
IC8001 M51468FP
DL8001
2H DL
6dB AMP
SIDE BAND DE-EMPHASIS
BURST 6dB DOWN
BURST CHANGE
MAIN BM
ACC
PB
REC
SUB BM
X-TAL VCO
PHASE ROTATION
D-PLL
3μs MMV
45μs MMV
5.2MHz B.P.F.
X8001
FROM SERVO
FROM VIDEO
HSS
P2502
IC3003 TL8808F
1H DL
IC3004 MST001MS
FREQ. DIVIDER
FL3003
LPF
TO SERVO
3.58MHz/
IC8002 AN3497SB
GCA
CEQ
IC3006 AN3580SB
VV
EE
CL
DATA MIX
TO JACK
C OUT
VIDEO OUT
Y OUT
TO EVF
EVF VIDEO
FROM CAMERA
ZONE
NON REC DATA
CAMERA C IN
IC3002 AN2265FAP
CLP
W-EXP
HPF LIM
LPF
DL
APT CONT
ART. V/H
AMP
NL DE
N-LPF
FL3002
DEM
LIM
MIX
HPF
YNR
IC3005 M52054FP
EC
5.4MHz
S Ⓗ OUTPUT
N
H↓
ME
MP
N-ON
H↓-ON
FL3005
FL3007
FL3008

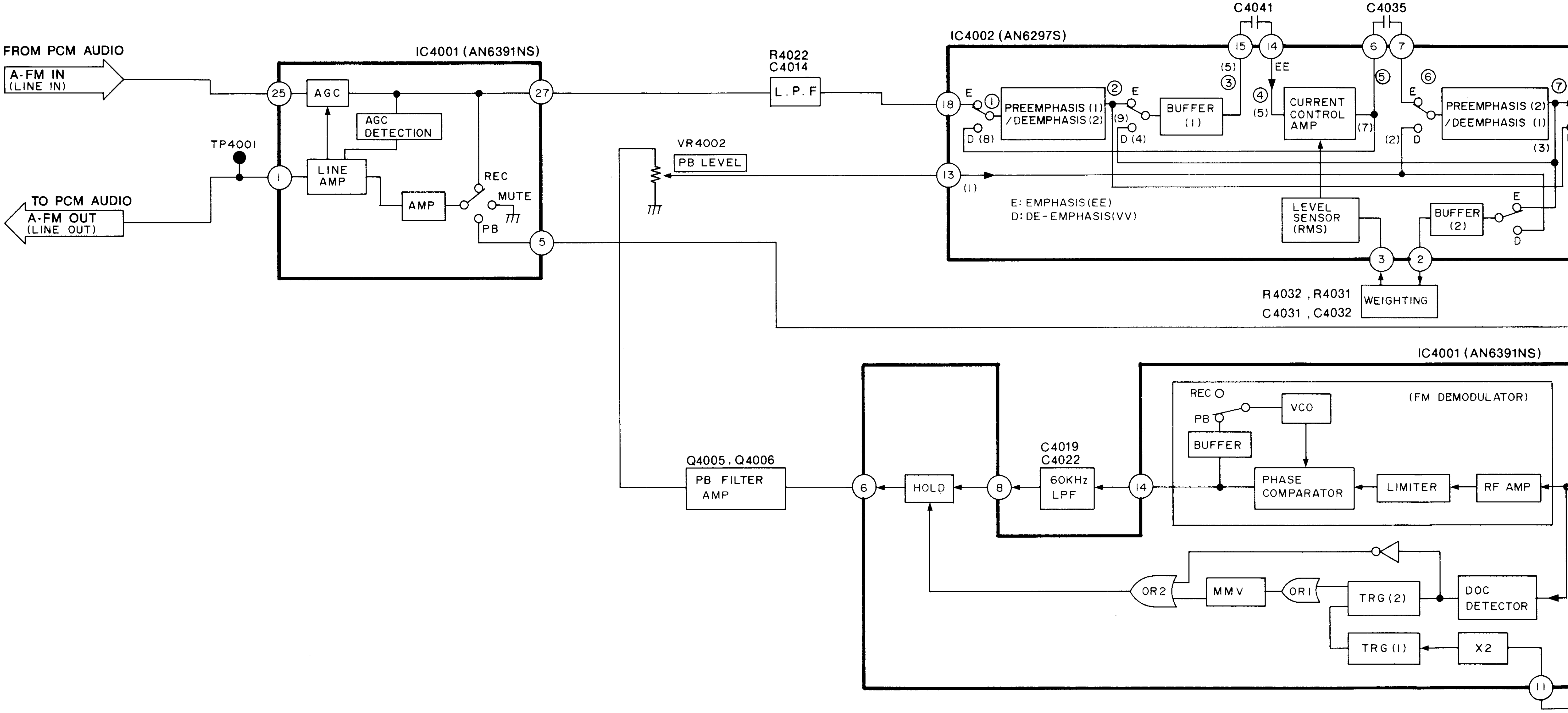
(Wiedergabe)
(Playback)

Blockschaltbild des Luminanz-und Farbteiles (Wiedergabe)
Luminance and Chrominance Block Diagram (Playback)

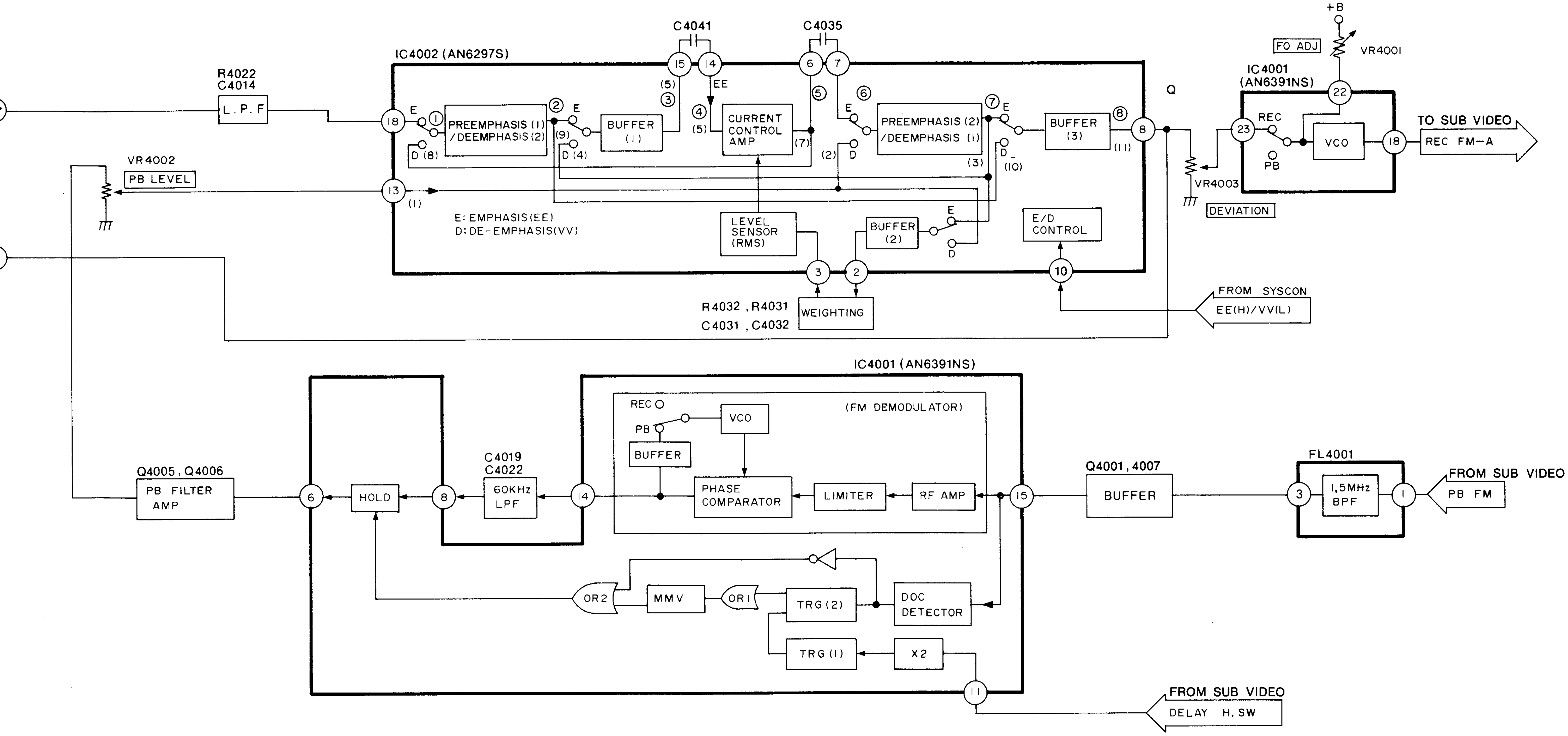


PCM HEAD/AMP
IC5003
M52055FP
AGC
Y OUT
C-OUT
Q5002
Q5001
H.A SW
PB Y
PB CHROMA
PB PCM
P5001 14
P3501 14
P5001 4
P3501 4
P5001 10
P3501 10
P5001 3
P3501 3
TO PCM AUDIO
P3502 13
P3001 13
D.H.S.
IC3502-⑮
IC3501
AN3218S
P.B. AMP
P.B. ATF AMP
FL3501
133KHz BPF
Q3504
TO FM AUDIO
PB FM AUDIO
P3502 10
P3001 10
TO SERVO
PB PILOT
FL8001
750KHz BPF
IC3503
AN3396S
TO SYSTEM CTL
C LOG Ⓗ
Q5005
QR5001
P5001 12
P3501 12
P5001 6
P3501 6
FROM SYSTEM CTL
STILL Ⓛ
FROM SERVO
H.AMP H.SW
STILL Ⓛ
H.A.SW
FL8002
BPF
IC8001
M51468FP
DL8001
2H DL
6dB AMP
SIDE BAND DE-EMPHASIS
BURST 6dB DOWN
BURST CHANGE
PB
REC
MAIN BM
ACC
5.2MHz B.P.F.
SUB BM
X-TAL VCO
X8001
PHASE ROTATION
D-PLL
3μs MMV
45μs MMV
P3001 2
P3502 2
FROM SERVO
HSS
P3001 11
P2502 11
FROM VIDEO
IC8002 AN3497SB
GCA
CEQ
VV
EE
CL
DATA MIX
FROM CAMERA
CAMERA C IN
IC3003
TL8808F
1H DL
FL3003
LPF
VR3017
LNC ADJ.
IC3004
MST001MS
FREQ. DIVIDER
TO SERVO
3.58MHz/4.43MHz
IC3005
M52054FP
EC
S Ⓗ OUTPUT
N
N-ON
5.4MHz
Hi
Hi-ON
FL3005
DL
FL3008
DL
ME
MP
FL3007
DL
DL
APT CONT
CLP
ART. V/H
AMP
DEM
LIM
MIX
LPF
HPF
YNR
CLP

Blockschaltbild des FM-Tonteiles
FM Audio Block Diagram

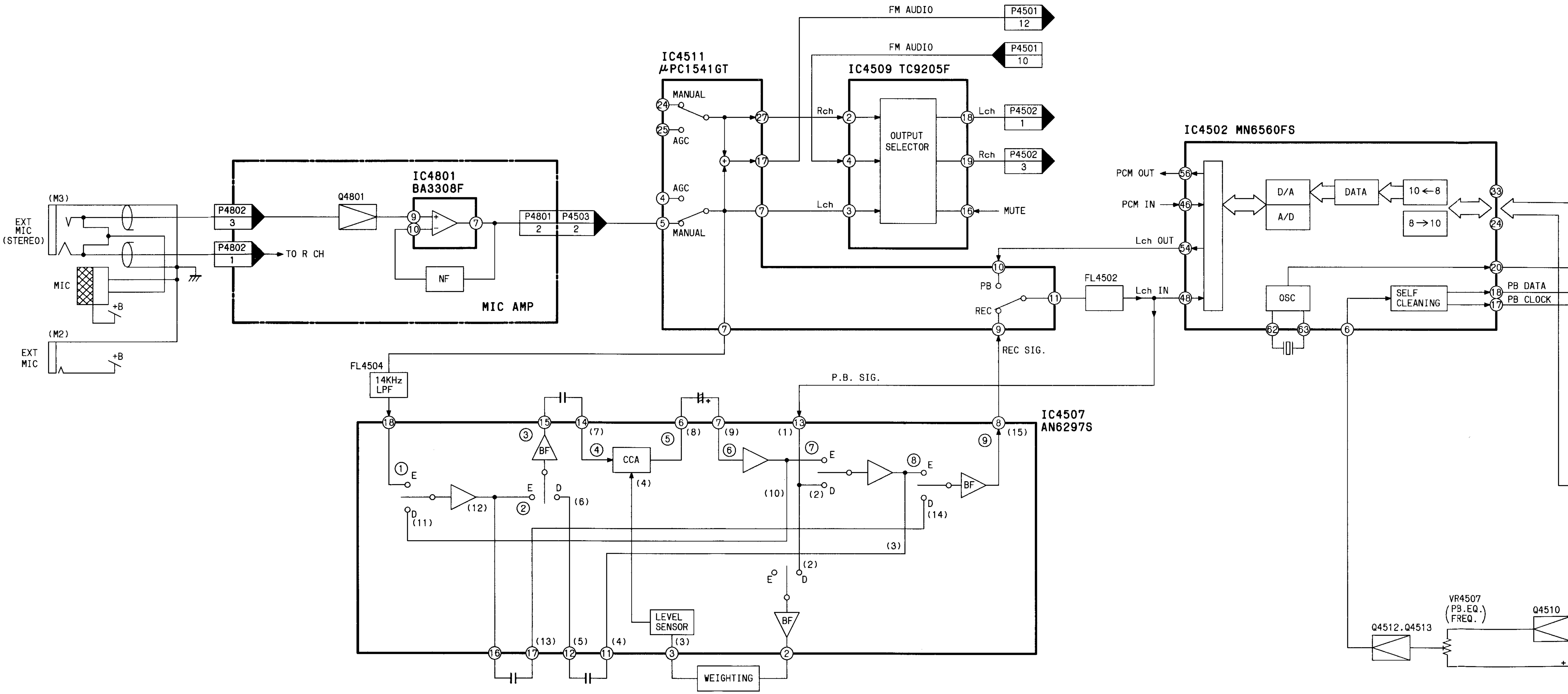

FROM PCM AUDIO
A-FM IN
(LINE IN)
TO PCM AUDIO
A-FM OUT
(LINE OUT)
TP4001
IC4001 (AN6391NS)
25
27
1
5
AGC
AGC DETECTION
LINE AMP
AMP
REC
MUTE
PB
R4022
C4014
L.P.F
VR4002
PB LEVEL
IC4002 (AN6297S)
C4041
C4035
18
13
15
14
6
7
3
2
E
D (8)
PREEMPHASIS (1) /DEEMPHASIS (2)
D (4)
(9)
BUFFER (1)
EE
CURRENT CONTROL AMP
(5)
(7)
PREEMPHASIS (2) /DEEMPHASIS (1)
(2)
D
(3)
(1)
E: EMPHASIS (EE)
D: DE-EMPHASIS (VV)
LEVEL SENSOR (RMS)
BUFFER (2)
WEIGHTING
R4032, R4031
C4031, C4032
IC4001 (AN6391NS)
(FM DEMODULATOR)
REC
PB
VCO
BUFFER
PHASE COMPARATOR
LIMITER
RF AMP
Q4005, Q4006
PB FILTER AMP
6
HOLD
8
C4019
C4022
60KHz LPF
14
OR2
MMV
OR1
TRG (2)
TRG (1)
DOC DETECTOR
X2
11

Blockschaltbild des FM-Tonteiles
FM Audio Block Diagram


R4022
C4014
L.P.F
IC4002 (AN6297S)
C4041
C4035
15
14
6
7
(5)
③
EE
④
(5)
⑤
⑥
E
①
PREEMPHASIS (1)
/DEEMPHASIS (2)
②
E
(9)
D (8)
D (4)
BUFFER
(1)
CURRENT
CONTROL
AMP
(7)
(2)
D
E
PREEMPHASIS (2)
/DEEMPHASIS (1)
⑦
E
D
(3)
(10)
BUFFER
(3)
⑧
(11)
8
18
13
(1)
VR4002
PB LEVEL
E: EMPHASIS(EE)
D: DE-EMPHASIS(VV)
LEVEL
SENSOR
(RMS)
BUFFER
(2)
E
D
E/D
CONTROL
3
2
10
R4032 , R4031
C4031 , C4032
WEIGHTING
Q
+B
FO ADJ
VR4001
IC4001
(AN6391NS)
22
23
REC
PB
VCO
18
TO SUB VIDEO
REC FM−A
VR4003
DEVIATION
FROM SYSCON
EE(H)/VV(L)
IC4001 (AN6391NS)
REC
PB
VCO
(FM DEMODULATOR)
BUFFER
PHASE
COMPARATOR
LIMITER
RF AMP
Q4005, Q4006
PB FILTER
AMP
6
HOLD
8
C4019
C4022
60KHz
LPF
14
15
Q4001, 4007
BUFFER
FL4001
3
1,5MHz
BPF
1
FROM SUB VIDEO
PB FM
OR2
MMV
OR1
TRG (2)
DOC
DETECTOR
TRG (1)
X2
11
FROM SUB VIDEO
DELAY H. SW

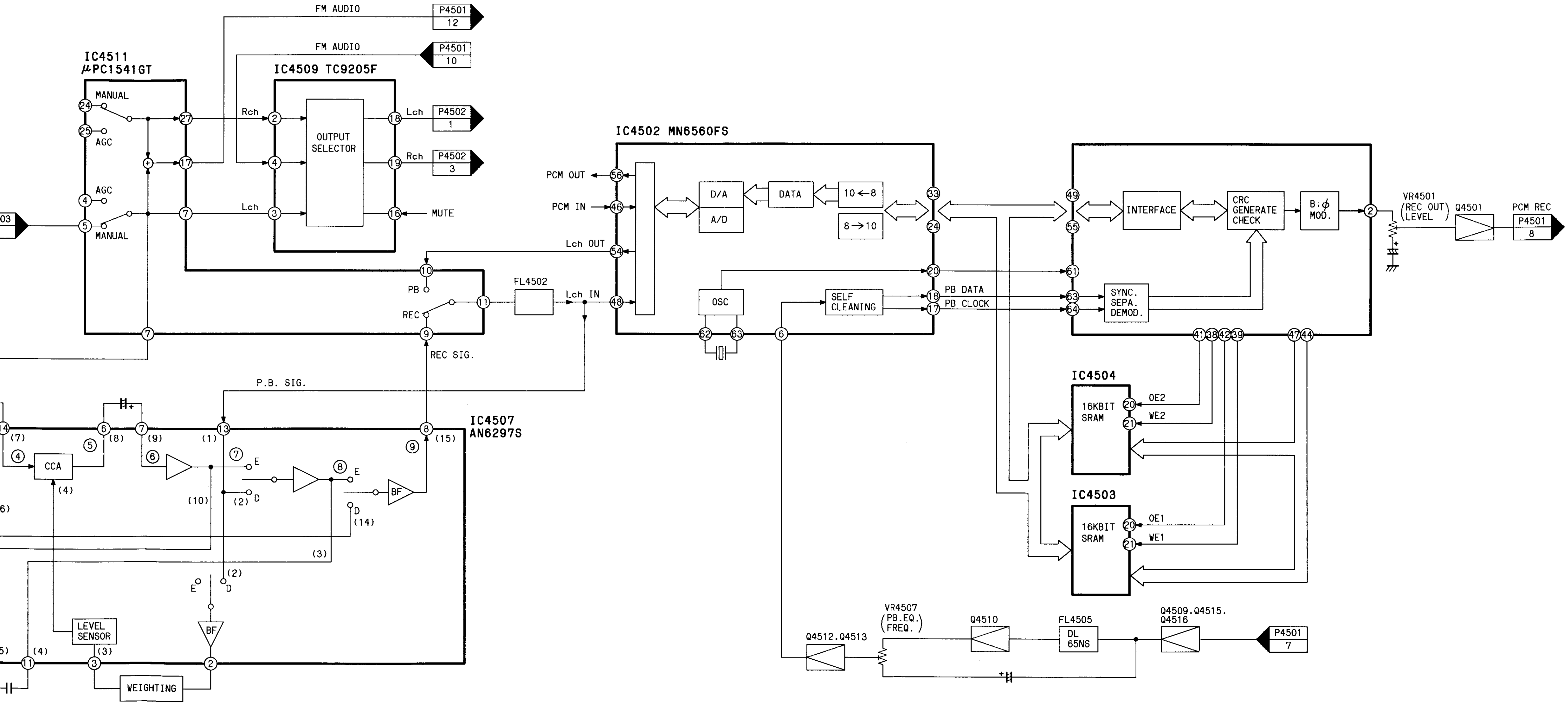
Blockschaltbild des PCM-Tonteiles
PCM Audio Block Diagram

Blocksch
PCM Aud



FM AUDIO
P4501 12
FM AUDIO
P4501 10
IC4511 μPC1541GT
MANUAL
AGC
AGC
MANUAL
IC4509 TC9205F
Rch
Lch
OUTPUT SELECTOR
Lch
P4502 1
Rch
P4502 3
MUTE
IC4502 MN6560FS
PCM OUT
PCM IN
Lch OUT
Lch IN
D/A
A/D
DATA
10←8
8→10
OSC
SELF CLEANING
PB DATA
PB CLOCK
FL4502
PB
REC
REC SIG.
P.B. SIG.
(M3)
EXT MIC (STEREO)
MIC
+B
(M2)
EXT MIC
+B
P4802 3
P4802 1
TO R CH
Q4801
IC4801 BA3308F
NF
MIC AMP
P4801 2
P4503 2
FL4504
14KHz LPF
IC4507 AN6297S
BF
CCA
LEVEL SENSOR
WEIGHTING
BF
BF
E
D
Q4512.Q4513
VR4507 (PB.EQ.) (FREQ.)
Q4510

Blockschaltbild des PCM-Tonteiles
PCM Audio Block Diagram



FM AUDIO
P4501 12
FM AUDIO
P4501 10
IC4511
μPC1541GT
MANUAL
AGC
AGC
MANUAL
IC4509 TC9205F
Rch
Lch
OUTPUT SELECTOR
Lch
P4502 1
Rch
P4502 3
MUTE
03
PB
REC
FL4502
Lch IN
Lch OUT
REC SIG.
P.B. SIG.
IC4502 MN6560FS
PCM OUT
PCM IN
D/A
A/D
DATA
10←8
8→10
OSC
SELF CLEANING
PB DATA
PB CLOCK
INTERFACE
CRC GENERATE CHECK
B;φ MOD.
SYNC. SEPA. DEMOD.
VR4501 (REC OUT LEVEL)
Q4501
PCM REC
P4501 8
IC4504
16KBIT SRAM
OE2
WE2
IC4503
16KBIT SRAM
OE1
WE1
IC4507
AN6297S
CCA
E
D
BF
LEVEL SENSOR
WEIGHTING
VR4507 (PB.EQ. FREQ.)
Q4512.Q4513
Q4510
FL4505
DL 65NS
Q4509.Q4515. Q4516
P4501 7

Handhabung von Chip-Bauteilen

Nachfolgend wird der Umgang mit Chip-Bauteilen beim Service beschrieben.

1. Aus- und Einbauen von Chip-Bauteilen

Hinweise:
Nur einen Niedervoltlötkolben mit Temperaturregelung verwenden.
Die Löttemperatur sollte ca. 240°C betragen, max. 300°C.

Die Lötzeit so kurz wie möglich halten.
Belassen Sie Chip-Bauteile bis zur Bearbeitung in der Originalverpackung. Damit wird die Oxidation der Stirnkontakte vermieden.
Die Chip-Bauteile nicht mit der bloßen Hand berühren.

2. Auslöten von Chip-Bauteilen

a. Die Chip-Lötstelle mit Sauglitze oder Zinnabsauger säubern (Fig.1).
b. Die Chip-Enden, bzw. das komplette Chip-Bauteil erwärmen. Den Chip von der Klebung ohne Kraftaufwand abdrehen, damit unter dem Chip liegende Leiterbahnen nicht abgerissen werden (Fig. 2).

ACHTUNG! Den ausgelöteten Chip nicht wiederverwenden! Die leitende Schicht kann ausgebrochen sein.

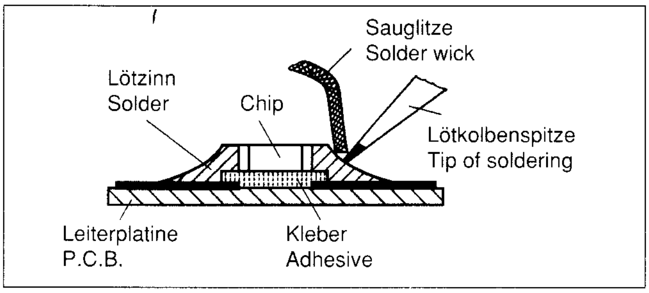

Sauglitze
Solder wick
Lötzinn
Solder
Chip
Lötkolbenspitze
Tip of soldering
Leiterplatine
P.C.B.
Kleber
Adhesive

Fig. 1

3. Einlöten von Chip-Bauteilen

a. Den Lötpunkt von Lötrückständen säubern. Eine Lötperle anbringen (Fig. 3).
b. Den Chip an der Lötstelle ansetzen, zentrieren und anlöten. Den Chip nur am Kontaktende mit der Pinzette anfassen (Fig.4).
c. Die freie Seite löten, und nach dem Erkalten die erste Lötstelle nochmals nachlöten (Fig 5).

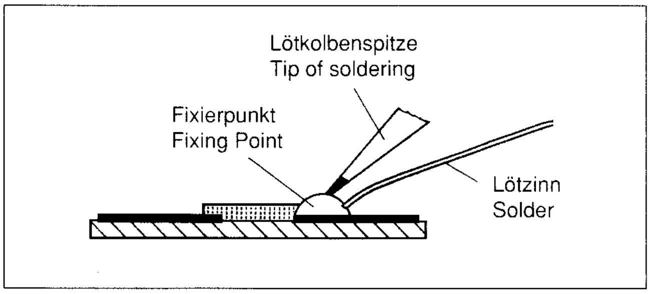

Lötkolbenspitze
Tip of soldering
Fixierpunkt
Fixing Point
Lötzinn
Solder

Fig. 3

Precautions in Replacing the Chip

Please, follow the instructions below when carrying out repair works.

1. Soldering and Unsoldering of Chip Components

Notes:
Use only low-voltage soldering irons with temperature control.
Permissible soldering temperatures are approx 240°C up to max. 300°C.
Keep the soldering period as short as possible.
Keep the chip components in their original packages until they are used to avoid oxidation of the end contacts.
Do not touch chip components with bare hands.

2. Unsoldering of Chips

a. Clean the chip soldering point with a solder wick (Fig. 1).
b. Warm up the ends of the chip or the whole chip component and remove the chip from the adhesive by turning it without application of force so that the tracks beneath the chip do not break (Fig. 2).

ATTENTION! Do not use unsoldered Chips any more because the conductive layer may be broken.

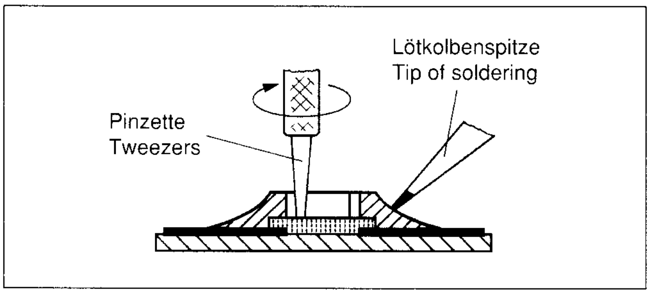

Lötkolbenspitze
Tip of soldering
Pinzette
Tweezers

Fig. 2

3. Soldering of Chips

a. Remove possible residues from the soldering point. Then apply a solder bead (Fig. 3).
b. Put the chip onto the soldering point, then center and fix it. Use tweezers to hold the chip only at the end of the contact (Fig. 4).
c. Solder the free end of the chip and resolder the first soldering point after it has cooled (Fig. 5).

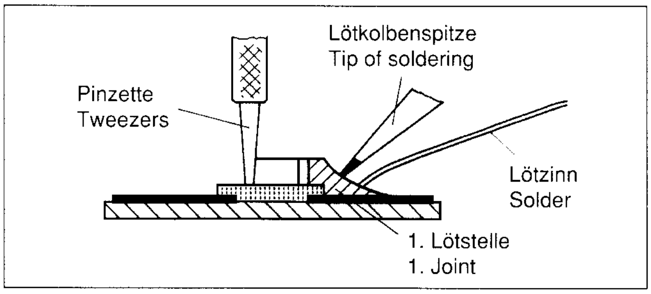

Lötkolbenspitze
Tip of soldering
Pinzette
Tweezers
Lötzinn
Solder
1. Lötstelle
1. Joint

Fig. 4

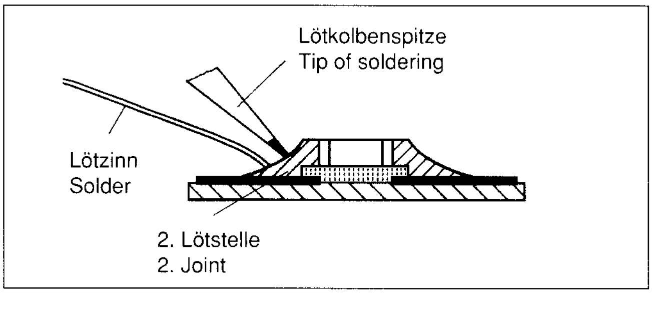
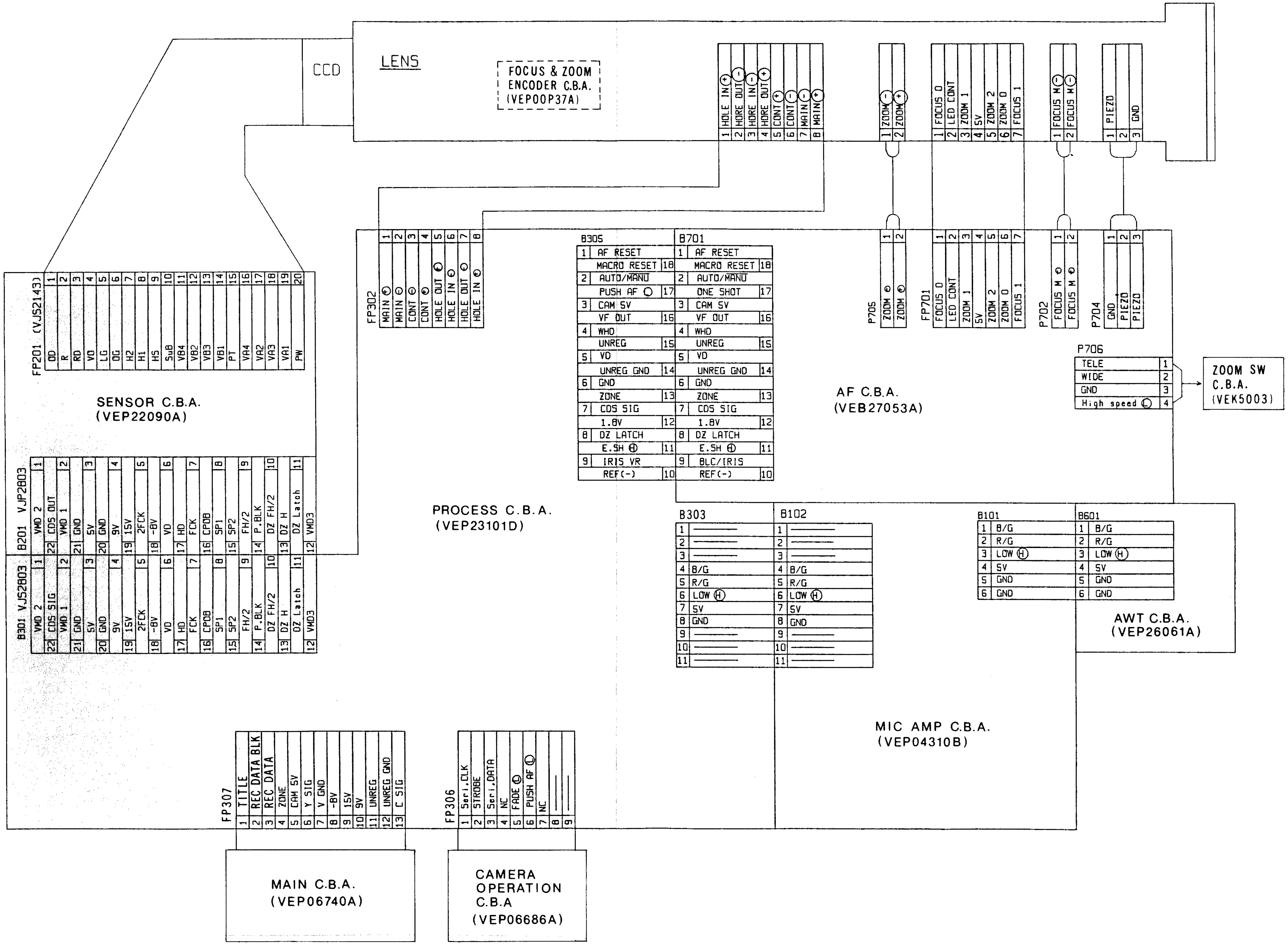
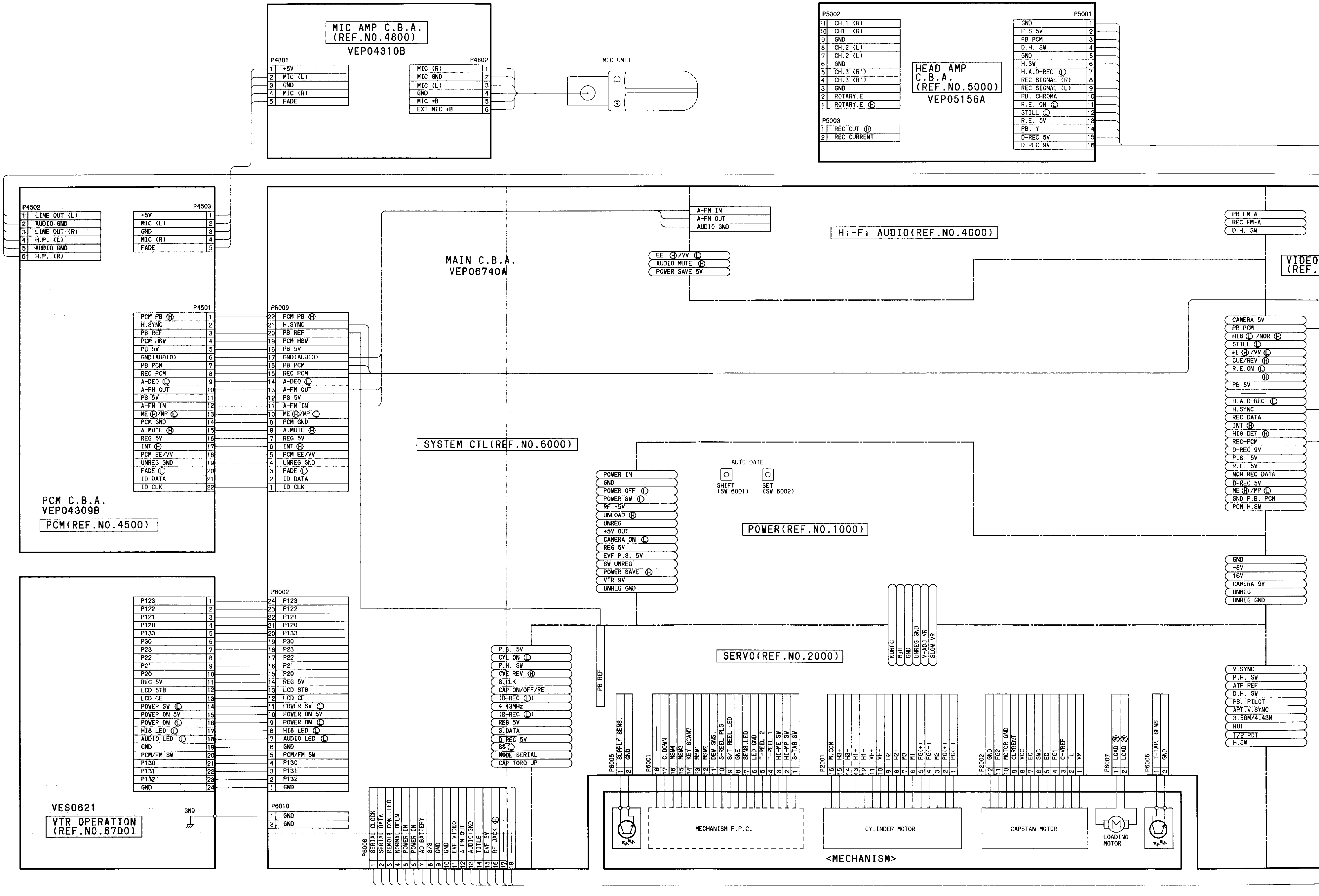

Lötkolbenspitze
Tip of soldering
Lötzinn
Solder
2. Lötstelle
2. Joint

Fig. 5

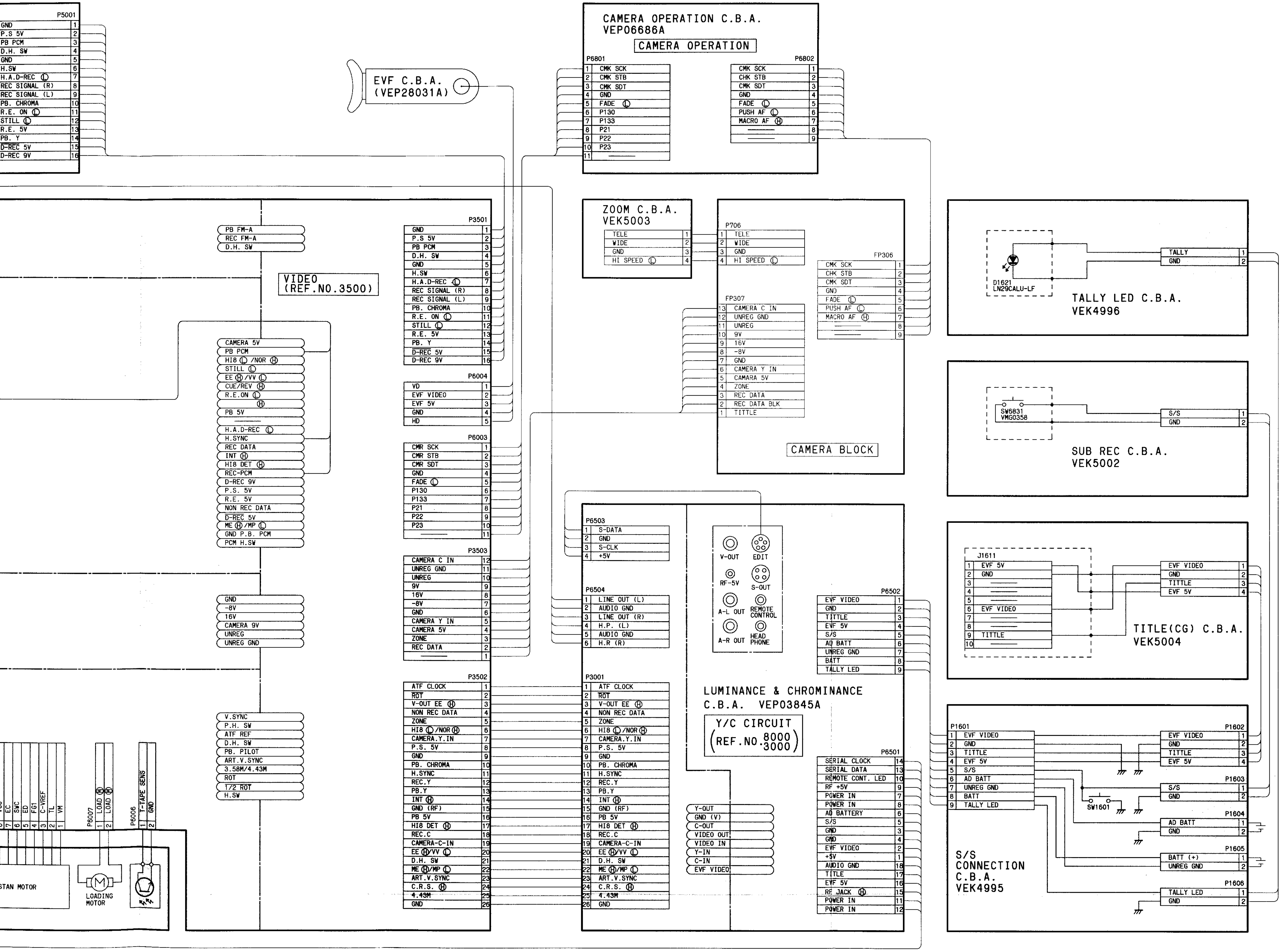
Kamera-Verdrahtungsplan
Camera Interconnection Schematic Diagram


LENS
CCD
FOCUS & ZOOM ENCODER C.B.A. (VEP00P37A)
1 HOLE IN(+) 2 HORE OUT(-) 3 HORE IN(-) 4 HORE OUT(+) 5 CONT(+) 6 CONT(-) 7 MAIN(-) 8 MAIN(+)
1 ZOOM(-) 2 ZOOM(+)
1 FOCUS 0 2 LED CONT 3 ZOOM 1 4 5V 5 ZOOM 2 6 ZOOM 0 7 FOCUS 1
1 FOCUS M(-) 2 FOCUS M(+)
1 PIEZO 2 3 GND
FP302 1 MAIN ⊕ 2 MAIN ⊖ 3 CONT ⊖ 4 CONT ⊕ 5 HOLE OUT ⊖ 6 HOLE IN ⊖ 7 HOLE OUT ⊕ 8 HOLE IN ⊕
FP201 (VJS2143) 1 OD 2 R 3 RD 4 VD 5 LG 6 OG 7 H2 8 H1 9 HS 10 SuB 11 VB4 12 VB2 13 VB3 14 VB1 15 PT 16 VA4 17 VA2 18 VA3 19 VA1 20 PW
SENSOR C.B.A. (VEP22090A)
B201 VJP2803 1 VMD 2 22 CDS OUT 2 VMD 1 21 GND 3 5V 20 GND 4 9V 19 15V 5 2FCK 18 -8V 6 VD 17 HD 7 FCK 16 CPOB 8 SP1 15 SP2 9 FH/2 14 P.BLK 10 DZ FH/2 13 DZ H 11 DZ Latch 12 VMD3
B301 VJS2803 1 VMD 2 22 CDS SIG 2 VMD 1 21 GND 3 5V 20 GND 4 9V 19 15V 5 2FCK 18 -8V 6 VD 17 HD 7 FCK 16 CPOB 8 SP1 15 SP2 9 FH/2 14 P.BLK 10 DZ FH/2 13 DZ H 11 DZ Latch 12 VMD3
B305 1 AF RESET 18 MACRO RESET 2 AUTO/MANU 17 PUSH AF ○ 3 CAM SV 16 VF OUT 4 WHD 15 UNREG 5 VD 14 UNREG GND 6 GND 13 ZONE 7 CDS SIG 12 1.8V 8 DZ LATCH 11 E.SH ⊕ 9 IRIS VR 10 REF(-)
B701 1 AF RESET 18 MACRO RESET 2 AUTO/MANU 17 ONE SHOT 3 CAM SV 16 VF OUT 4 WHD 15 UNREG 5 VD 14 UNREG GND 6 GND 13 ZONE 7 CDS SIG 12 1.8V 8 DZ LATCH 11 E.SH ⊕ 9 BLC/IRIS 10 REF(-)
P705 1 ZOOM ⊖ 2 ZOOM ⊕
FP701 1 FOCUS 0 2 LED CONT 3 ZOOM 1 4 5V 5 ZOOM 2 6 ZOOM 0 7 FOCUS 1
P702 1 FOCUS M ⊖ 2 FOCUS M ⊕
P704 1 GND 2 PIEZO 3 PIEZO
P706 1 TELE 2 WIDE 3 GND 4 High speed Ⓛ
ZOOM SW C.B.A. (VEK5003)
AF C.B.A. (VEB27053A)
PROCESS C.B.A. (VEP23101D)
B303 1 2 3 4 B/G 5 R/G 6 LOW Ⓗ 7 5V 8 GND 9 10 11
B102 1 2 3 4 B/G 5 R/G 6 LOW Ⓗ 7 5V 8 GND 9 10 11
B101 1 B/G 2 R/G 3 LOW Ⓗ 4 5V 5 GND 6 GND
B601 1 B/G 2 R/G 3 LOW Ⓗ 4 5V 5 GND 6 GND
AWT C.B.A. (VEP26061A)
MIC AMP C.B.A. (VEP04310B)
FP307 1 TITLE 2 REC DATA BLK 3 REC DATA 4 ZONE 5 CAM 5V 6 Y SIG 7 V GND 8 -8V 9 15V 10 9V 11 UNREG 12 UNREG GND 13 C SIG
FP306 1 Seri.CLK 2 STROBE 3 Seri.DATA 4 NC 5 FADE Ⓛ 6 PUSH AF Ⓛ 7 NC 8 9
MAIN C.B.A. (VEP06740A)
CAMERA OPERATION C.B.A (VEP06686A)

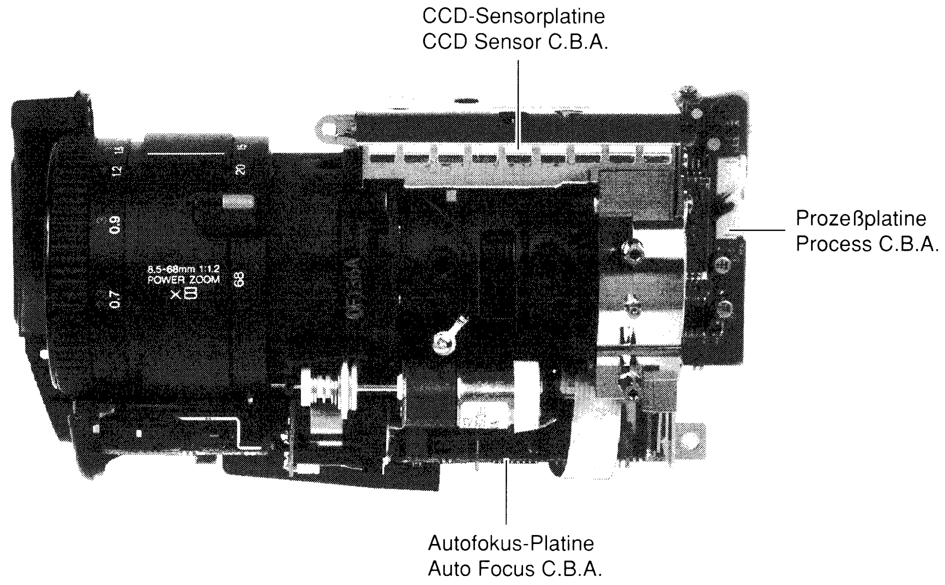
VTR-Verdrahtungsplan
VTR Interconnection Schematic Diagram

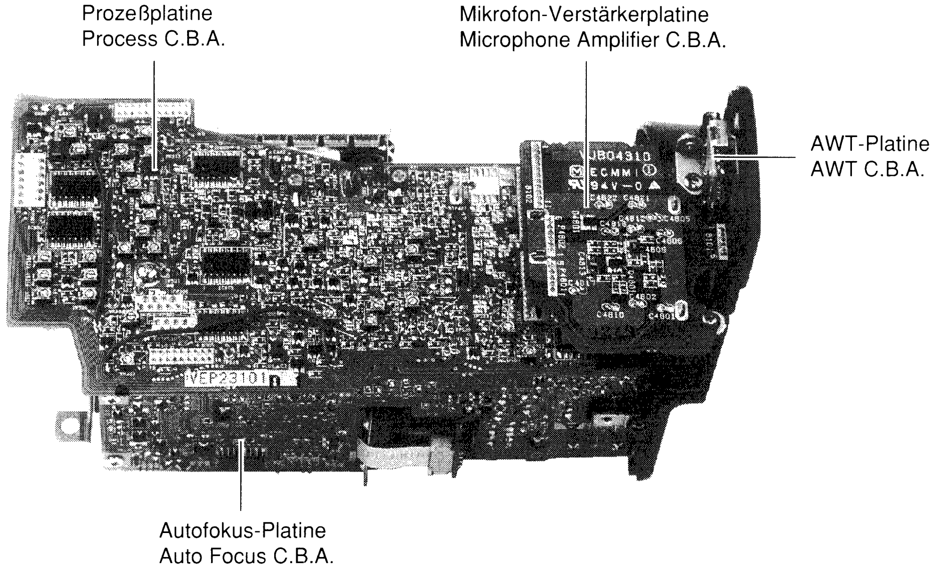

MIC AMP C.B.A.
(REF.NO.4800)
VEP04310B
P4801
+5V
MIC (L)
GND
MIC (R)
FADE
P4802
MIC (R)
MIC GND
MIC (L)
GND
MIC +B
EXT MIC +B
MIC UNIT
HEAD AMP
C.B.A.
(REF.NO.5000)
VEP05156A
P5002
CH.1 (R)
CH1. (R)
GND
CH.2 (L)
CH.2 (L)
GND
CH.3 (R')
CH.3 (R')
GND
ROTARY.E
ROTARY.E Ⓗ
P5003
REC CUT Ⓗ
REC CURRENT
P5001
GND
P.S 5V
PB PCM
D.H. SW
GND
H.SW
H.A.D-REC Ⓛ
REC SIGNAL (R)
REC SIGNAL (L)
PB. CHROMA
R.E. ON Ⓛ
STILL Ⓛ
R.E. 5V
PB. Y
D-REC 5V
D-REC 9V
P4502
LINE OUT (L)
AUDIO GND
LINE OUT (R)
H.P. (L)
AUDIO GND
H.P. (R)
P4503
+5V
MIC (L)
GND
MIC (R)
FADE
P4501
PCM PB Ⓗ
H.SYNC
PB REF
PCM HSW
PB 5V
GND(AUDIO)
PB PCM
REC PCM
A-DEO Ⓛ
A-FM OUT
PS 5V
A-FM IN
ME Ⓗ/MP Ⓛ
PCM GND
A.MUTE Ⓗ
REG 5V
INT Ⓗ
PCM EE/VV
UNREG GND
FADE Ⓛ
ID DATA
ID CLK
PCM C.B.A.
VEP04309B
PCM(REF.NO.4500)
P6009
MAIN C.B.A.
VEP06740A
A-FM IN
A-FM OUT
AUDIO GND
Hi-Fi AUDIO(REF.NO.4000)
EE Ⓗ/VV Ⓛ
AUDIO MUTE Ⓗ
POWER SAVE 5V
PB FM-A
REC FM-A
D.H. SW
VIDEO
(REF.
SYSTEM CTL(REF.NO.6000)
POWER IN
GND
POWER OFF Ⓛ
POWER SW Ⓛ
RF +5V
UNLOAD Ⓗ
UNREG
+5V OUT
CAMERA ON Ⓛ
REG 5V
EVF P.S. 5V
SW UNREG
POWER SAVE Ⓗ
VTR 9V
UNREG GND
AUTO DATE
SHIFT
(SW 6001)
SET
(SW 6002)
POWER(REF.NO.1000)
CAMERA 5V
PB PCM
HI8 Ⓛ/NOR Ⓗ
STILL Ⓛ
EE Ⓗ/VV Ⓛ
CUE/REV Ⓗ
R.E.ON Ⓛ
Ⓗ
PB 5V
H.A.D-REC Ⓛ
H.SYNC
REC DATA
INT Ⓗ
HI8 DET Ⓗ
REC-PCM
D-REC 9V
P.S. 5V
R.E. 5V
NON REC DATA
D-REC 5V
ME Ⓗ/MP Ⓛ
GND P.B. PCM
PCM H.SW
GND
-8V
16V
CAMERA 9V
UNREG
UNREG GND
P6002
P123
P122
P121
P120
P133
P30
P23
P22
P21
P20
REG 5V
LCD STB
LCD CE
POWER SW Ⓛ
POWER ON 5V
POWER ON Ⓛ
HI8 LED Ⓛ
AUDIO LED Ⓛ
GND
PCM/FM SW
P130
P131
P132
GND
VES0621
VTR OPERATION
(REF.NO.6700)
GND
P6010
GND
GND
P6008
SERIAL CLOCK
SERIAL DATA
REMOTE CONT.LED
NORMAL OPEN
POWER IN
POWER IN
AD BATTERY
S/S
GND
GND
EVF VIDEO
A.FM OUT
AUDIO GND
TITLE
EVF 5V
RF JACK Ⓗ
P.S. 5V
CYL ON Ⓛ
P.H. SW
CUE REV Ⓗ
S.CLK
CAP ON/OFF/RE
(D-REC Ⓛ)
4.43MHz
(D-REC Ⓛ)
REG 5V
S.DATA
D.REC 5V
SS Ⓛ
MODE SERIAL
CAP TORQ UP
PB REF
SERVO(REF.NO.2000)
NUREG
6/H
GND
UNREG GND
V-ADJ VR
SLOW VR
V.SYNC
P.H. SW
ATF REF
D.H. SW
PB. PILOT
ART.V.SYNC
3.58M/4.43M
ROT
1/2 ROT
H.SW
P6005
SUPPLY SENS.
GND
P6001
C.DOWN
MSW4
MSW3
KEY SCAN7
MSW1
MSW2
DEW SNS
S-REEL PLS
S/T REEL LED
GNE
SENS.LED
LED GND
T-REEL 2
T-REEL 1
HI-ME SW
HI-MP SW
S-TAB SW
P2001
M.COM
H3+
H3-
H1+
H1-
VH+
VH-
H2-
H2+
M3
M1
FG(+)
FG(-)
M2
PG(+)
PG(-)
P2002
GND
FG2
MOTOR GND
CURRENT
VCC
EC
SWC
ED
FG1
C-VREF
TL
VM
P6007
LOAD Ⓜ
LOAD Ⓜ
P6006
T-TAPE SENS
GND
MECHANISM F.P.C.
CYLINDER MOTOR
CAPSTAN MOTOR
LOADING
MOTOR
<MECHANISM>

VTR-Verdrahtungsplan
VTR Interconnection Schematic Diagram

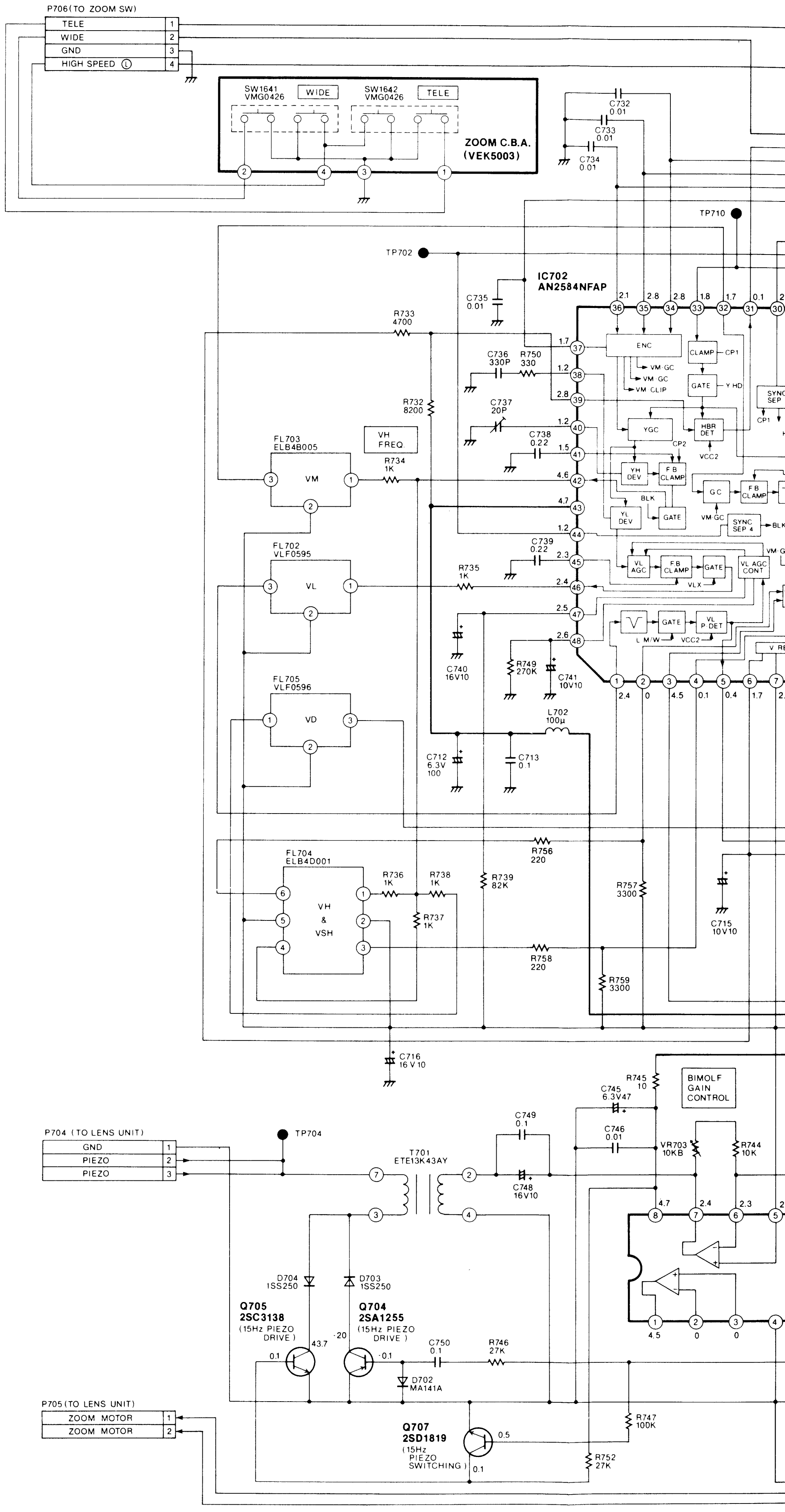

P5001
GND 1
P.S 5V 2
PB PCM 3
D.H. SW 4
GND 5
H.SW 6
H.A.D-REC Ⓛ 7
REC SIGNAL (R) 8
REC SIGNAL (L) 9
PB. CHROMA 10
R.E. ON Ⓛ 11
STILL Ⓛ 12
R.E. 5V 13
PB. Y 14
D-REC 5V 15
D-REC 9V 16
EVF C.B.A. (VEP28031A)
CAMERA OPERATION C.B.A. VEP06686A
CAMERA OPERATION
P6801
1 CMK SCK
2 CMK STB
3 CMK SDT
4 GND
5 FADE Ⓛ
6 P130
7 P133
8 P21
9 P22
10 P23
11
P6802
CMK SCK 1
CHK STB 2
CMK SDT 3
GND 4
FADE Ⓛ 5
PUSH AF Ⓛ 6
MACRO AF Ⓗ 7
8
9
ZOOM C.B.A. VEK5003
TELE 1
WIDE 2
GND 3
HI SPEED Ⓛ 4
P706
1 TELE
2 WIDE
3 GND
4 HI SPEED Ⓛ
FP306
CMK SCK 1
CHK STB 2
CMK SDT 3
GND 4
FADE Ⓛ 5
PUSH AF Ⓛ 6
MACRO AF Ⓗ 7
8
9
FP307
13 CAMERA C IN
12 UNREG GND
11 UNREG
10 9V
9 16V
8 -8V
7 GND
6 CAMERA Y IN
5 CAMARA 5V
4 ZONE
3 REC DATA
2 REC DATA BLK
1 TITTLE
CAMERA BLOCK
VIDEO (REF.NO.3500)
PB FM-A
REC FM-A
D.H. SW
CAMERA 5V
PB PCM
HI8 Ⓛ /NOR Ⓗ
STILL Ⓛ
EE Ⓗ/VV Ⓛ
CUE/REV Ⓗ
R.E.ON Ⓛ
Ⓗ
PB 5V
H.A.D-REC Ⓛ
H.SYNC
REC DATA
INT Ⓗ
HI8 DET Ⓗ
REC-PCM
D-REC 9V
P.S. 5V
R.E. 5V
NON REC DATA
D-REC 5V
ME Ⓗ/MP Ⓛ
GND P.B. PCM
PCM H.SW
GND
-8V
16V
CAMERA 9V
UNREG
UNREG GND
V.SYNC
P.H. SW
ATF REF
D.H. SW
PB. PILOT
ART.V.SYNC
3.58M/4.43M
ROT
1/2 ROT
H.SW
P3501
GND 1
P.S 5V 2
PB PCM 3
D.H. SW 4
GND 5
H.SW 6
H.A.D-REC Ⓛ 7
REC SIGNAL (R) 8
REC SIGNAL (L) 9
PB. CHROMA 10
R.E. ON Ⓛ 11
STILL Ⓛ 12
R.E. 5V 13
PB. Y 14
D-REC 5V 15
D-REC 9V 16
P6004
VD 1
EVF VIDEO 2
EVF 5V 3
GND 4
HD 5
P6003
CMR SCK 1
CMR STB 2
CMR SDT 3
GND 4
FADE Ⓛ 5
P130 6
P133 7
P21 8
P22 9
P23 10
11
P3503
CAMERA C IN 12
UNREG GND 11
UNREG 10
9V 9
16V 8
-8V 7
GND 6
CAMERA Y IN 5
CAMERA 5V 4
ZONE 3
REC DATA 2
1
P3502
ATF CLOCK 1
ROT 2
V-OUT EE Ⓗ 3
NON REC DATA 4
ZONE 5
HI8 Ⓛ/NOR Ⓗ 6
CAMERA.Y.IN 7
P.S. 5V 8
GND 9
PB. CHROMA 10
H.SYNC 11
REC.Y 12
PB.Y 13
INT Ⓗ 14
GND (RF) 15
PB 5V 16
HI8 DET Ⓗ 17
REC.C 18
CAMERA-C-IN 19
EE Ⓗ/VV Ⓛ 20
D.H. SW 21
ME Ⓗ/MP Ⓛ 22
ART.V.SYNC 23
C.R.S. Ⓗ 24
4.43M 25
GND 26
EC SWC ED FG1 C-VREF TL VM
7 6 5 4 3 2 1
P6007 LOAD Ⓗ LOAD Ⓗ 1 2
P6006 T-TAPE SENS GND 1 2
STAN MOTOR
LOADING MOTOR
P6503
1 S-DATA
2 GND
3 S-CLK
4 +5V
P6504
1 LINE OUT (L)
2 AUDIO GND
3 LINE OUT (R)
4 H.P. (L)
5 AUDIO GND
6 H.R (R)
V-OUT
EDIT
RF-5V
S-OUT
A-L OUT
REMOTE CONTROL
A-R OUT
HEAD PHONE
P3001
1 ATF CLOCK
2 ROT
3 V-OUT EE Ⓗ
4 NON REC DATA
5 ZONE
6 HI8 Ⓛ/NOR Ⓗ
7 CAMERA.Y.IN
8 P.S. 5V
9 GND
10 PB. CHROMA
11 H.SYNC
12 REC.Y
13 PB.Y
14 INT Ⓗ
15 GND (RF)
16 PB 5V
17 HI8 DET Ⓗ
18 REC.C
19 CAMERA-C-IN
20 EE Ⓗ/VV Ⓛ
21 D.H. SW
22 ME Ⓗ/MP Ⓛ
23 ART.V.SYNC
24 C.R.S. Ⓗ
25 4.43M
26 GND
LUMINANCE & CHROMINANCE C.B.A. VEP03845A
Y/C CIRCUIT (REF.NO.8000 3000)
Y-OUT
GND (V)
C-OUT
VIDEO OUT
VIDEO IN
Y-IN
C-IN
EVF VIDEO
P6502
EVF VIDEO 1
GND 2
TITTLE 3
EVF 5V 4
S/S 5
AD BATT 6
UNREG GND 7
BATT 8
TALLY LED 9
P6501
SERIAL CLOCK 14
SERIAL DATA 13
REMOTE CONT. LED 10
RF +5V 9
POWER IN 7
POWER IN 8
AD BATTERY 6
S/S 5
GND 3
GND 4
EVF VIDEO 2
+5V 1
AUDIO GND 18
TITLE 17
EVF 5V 16
RE JACK Ⓗ 15
POWER IN 11
POWER IN 12
D1621 LN29CALU-LF
TALLY 1
GND 2
TALLY LED C.B.A. VEK4996
SW6831 VMG0358
S/S 1
GND 2
SUB REC C.B.A. VEK5002
J1611
1 EVF 5V
2 GND
3
4
5
6 EVF VIDEO
7
8
9 TITTLE
10
EVF VIDEO 1
GND 2
TITTLE 3
EVF 5V 4
TITLE(CG) C.B.A. VEK5004
P1601
1 EVF VIDEO
2 GND
3 TITTLE
4 EVF 5V
5 S/S
6 AD BATT
7 UNREG GND
8 BATT
9 TALLY LED
SW1601
P1602
EVF VIDEO 1
GND 2
TITTLE 3
EVF 5V 4
P1603
S/S 1
GND 2
P1604
AD BATT 1
GND 2
P1605
BATT (+) 1
UNREG GND 2
P1606
TALLY LED 1
GND 2
S/S CONNECTION C.B.A. VEK4995

Lage der Platinen im Gerät
Circuit Boards Layout


CCD-Sensorplatine
CCD Sensor C.B.A.
Prozeßplatine
Process C.B.A.
Autofokus-Platine
Auto Focus C.B.A.
8.5-68mm 1:1.2
POWER ZOOM
×8


Prozeßplatine
Process C.B.A.
Mikrofon-Verstärkerplatine
Microphone Amplifier C.B.A.
AWT-Platine
AWT C.B.A.
Autofokus-Platine
Auto Focus C.B.A.
VEP23101

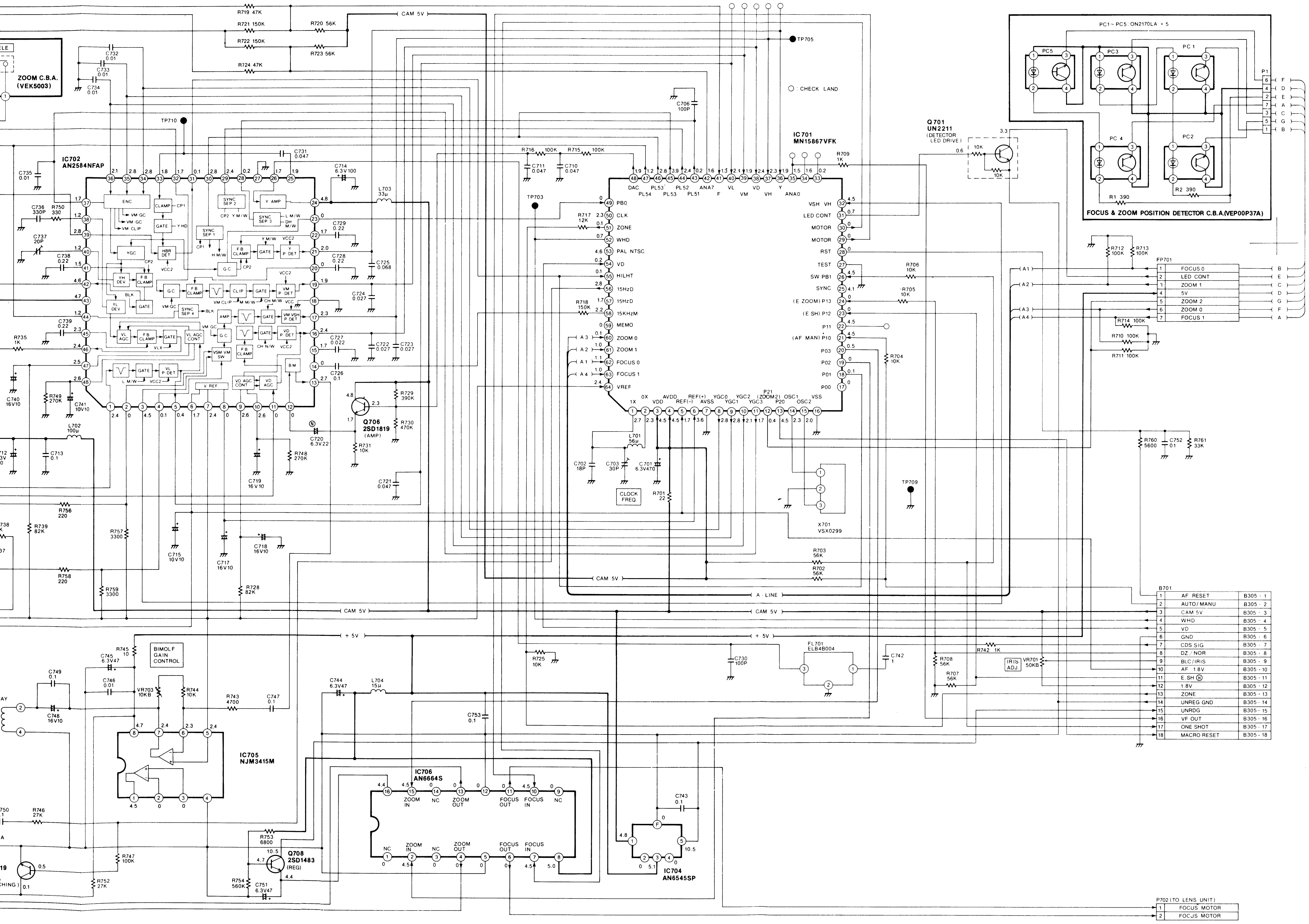
Schaltbild des Autofokusteiles
Auto Focus Schematic Diagram


P706 (TO ZOOM SW)
TELE
WIDE
GND
HIGH SPEED ①
SW1641
VMG0426
WIDE
SW1642
VMG0426
TELE
ZOOM C.B.A.
(VEK5003)
C732
0.01
C733
0.01
C734
0.01
TP710
TP702
IC702
AN2584NFAP
C735
0.01
R733
4700
C736
330P
R750
330
R732
8200
C737
20P
C738
0.22
VH
FREQ
R734
1K
FL703
ELB4B005
VM
FL702
VLF0595
VL
C739
0.22
R735
1K
C740
16V10
R749
270K
C741
10V10
FL705
VLF0596
VD
L702
100µ
C712
6.3V
100
C713
0.1
ENC
CLAMP
GATE
YGC
HBR
DET
YH
DEV
FB
CLAMP
GC
YL
DEV
SYNC
SEP
VL
AGC
VL AGC
CONT
VL
P DET
R756
220
FL704
ELB4D001
VH
&
VSH
R736
1K
R738
1K
R737
1K
R739
82K
R757
3300
C715
10V10
R758
220
R759
3300
C716
16V10
R745
10
C745
6.3V47
BIMOLF
GAIN
CONTROL
C749
0.1
C746
0.01
VR703
10KB
R744
10K
P704 (TO LENS UNIT)
GND
PIEZO
PIEZO
TP704
T701
ETE13K43AY
C748
16V10
D704
1SS250
D703
1SS250
Q705
2SC3138
(15Hz PIEZO
DRIVE)
Q704
2SA1255
(15Hz PIEZO
DRIVE)
C750
0.1
R746
27K
D702
MA141A
P705 (TO LENS UNIT)
ZOOM MOTOR
ZOOM MOTOR
Q707
2SD1819
(15Hz
PIEZO
SWITCHING)
R747
100K
R752
27K

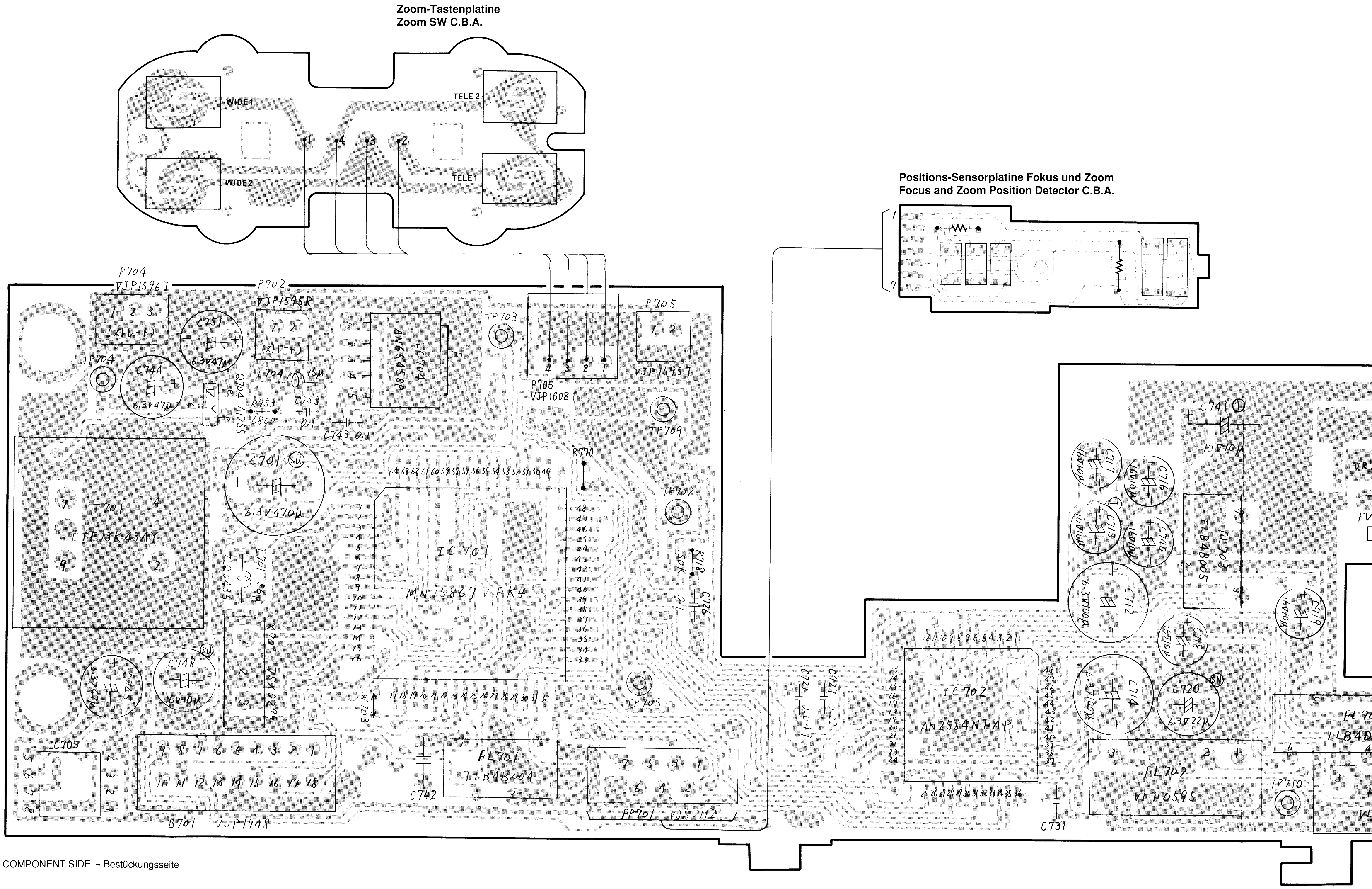
Für Werte ohne Bezeichnung F (µF) oder Ω einsetzen.
Read F (µF) or Ω respectively unless otherwise noted.

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen (Betriebsart Stop).
DC voltages tol. ± 15 % measured with digital voltmeter against GND (Stop mode).

Schaltbild des Autofokusteiles
Auto Focus Schematic Diagram


ZOOM C.B.A.
(VEK5003)
IC702
AN2584NFAP
IC701
MN15867VFK
Q701
UN2211
(DETECTOR LED DRIVE)
Q706
2SD1819
(AMP)
Q708
2SD1483
(REG)
IC705
NJM3415M
IC706
AN6664S
IC704
AN6545SP
BIMOLF GAIN CONTROL
CLOCK FREQ
X701
VSX0299
FL701
ELB4B004
IRIS ADJ.
VR701 50KB
TP703
TP705
TP709
TP710
○ : CHECK LAND
CAM 5V
+5V
A · LINE
PC1 ~ PC5: ON2170LA × 5
PC1
PC2
PC3
PC4
PC5
P1
R1 390
R2 390
FOCUS & ZOOM POSITION DETECTOR C.B.A.(VEP00P37A)
FP701
1 FOCUS 0
2 LED CONT
3 ZOOM 1
4 5V
5 ZOOM 2
6 ZOOM 0
7 FOCUS 1
B701
1 AF RESET B305 · 1
2 AUTO/MANU B305 · 2
3 CAM 5V B305 · 3
4 WHD B305 · 4
5 VD B305 · 5
6 GND B305 · 6
7 CDS SIG B305 · 7
8 DZ / NOR B305 · 8
9 BLC/IRIS B305 · 9
10 AF 1.8V B305 · 10
11 E.SH Ⓗ B305 · 11
12 1.8V B305 · 12
13 ZONE B305 · 13
14 UNREG GND B305 · 14
15 UNRDG B305 · 15
16 VF OUT B305 · 16
17 ONE SHOT B305 · 17
18 MACRO RESET B305 · 18
P702 (TO LENS UNIT)
1 FOCUS MOTOR
2 FOCUS MOTOR
ZOOM IN
ZOOM OUT
FOCUS OUT
FOCUS IN
NC
ENC
SYNC SEP 1
SYNC SEP 2
SYNC SEP 3
SYNC SEP 4
Y AMP
YGC
HBR DET
FB CLAMP
GATE
CLIP
VM P.DET
YH DEV
YL DEV
VL AGC
VL AGC CONT
VSM VM SW
VD AGC CONT
VD AGC
BM
V REF
PB0
CLK
ZONE
WHD
PAL NTSC
VD
HILHT
15HzD
15KHzM
MEMO
ZOOM 0
ZOOM 1
FOCUS 0
FOCUS 1
VREF
VSH VH
LED CONT
MOTOR
RST
TEST
SW PB1
SYNC
(E.ZOOM) P13
(E.SH) P12
P11
(AF MAN) P10
P03
P02
P01
P00
R719 47K
R721 150K
R720 56K
R722 150K
R723 56K
R724 47K
R716 100K
R715 100K
R709 1K
R717 12K
R718 150K
R706 10K
R705 10K
R704 10K
R712 100K
R713 100K
R714 100K
R710 100K
R711 100K
R760 5600
R761 33K
R729 390K
R730 470K
R731 10K
R748 270K
R749 270K
R735 1K
R750 330
R756 220
R757 3300
R758 220
R759 3300
R739 82K
R728 82K
R701 22
R703 56K
R702 56K
R725 10K
R708 56K
R707 56K
R742 1K
R745 10
R743 4700
R744 10K
R746 27K
R747 100K
R752 27K
R753 6800
R754 560K
VR703 10KB
C732 0.01
C733 0.01
C734 0.01
C735 0.01
C736 330P
C737 20P
C738 0.22
C739 0.22
C740 16V10
C741 10V10
C731 0.047
C714 6.3V100
C729 0.22
C728 0.22
C725 0.068
C724 0.027
C727 0.022
C722 0.027
C723 0.027
C726 0.1
C720 6.3V22
C721 0.047
C719 16V10
C715 10V10
C717 16V10
C718 16V10
C713 0.1
C706 100P
C711 0.047
C710 0.047
C702 18P
C703 30P
C701 6.3V470
C752 0.1
C730 100P
C742 1
C744 6.3V47
C753 0.1
C743 0.1
C745 6.3V47
C746 0.01
C747 0.1
C748 16V10
C749 0.1
C751 6.3V47
L701 56μ
L702 100μ
L703 33μ
L704 15μ

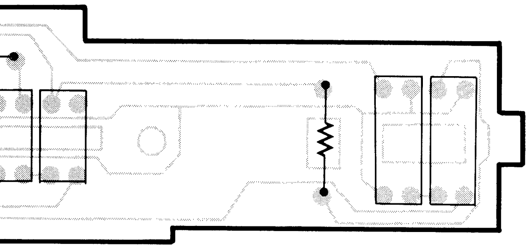
Autofokus-Platine
Auto Focus C.B.A.



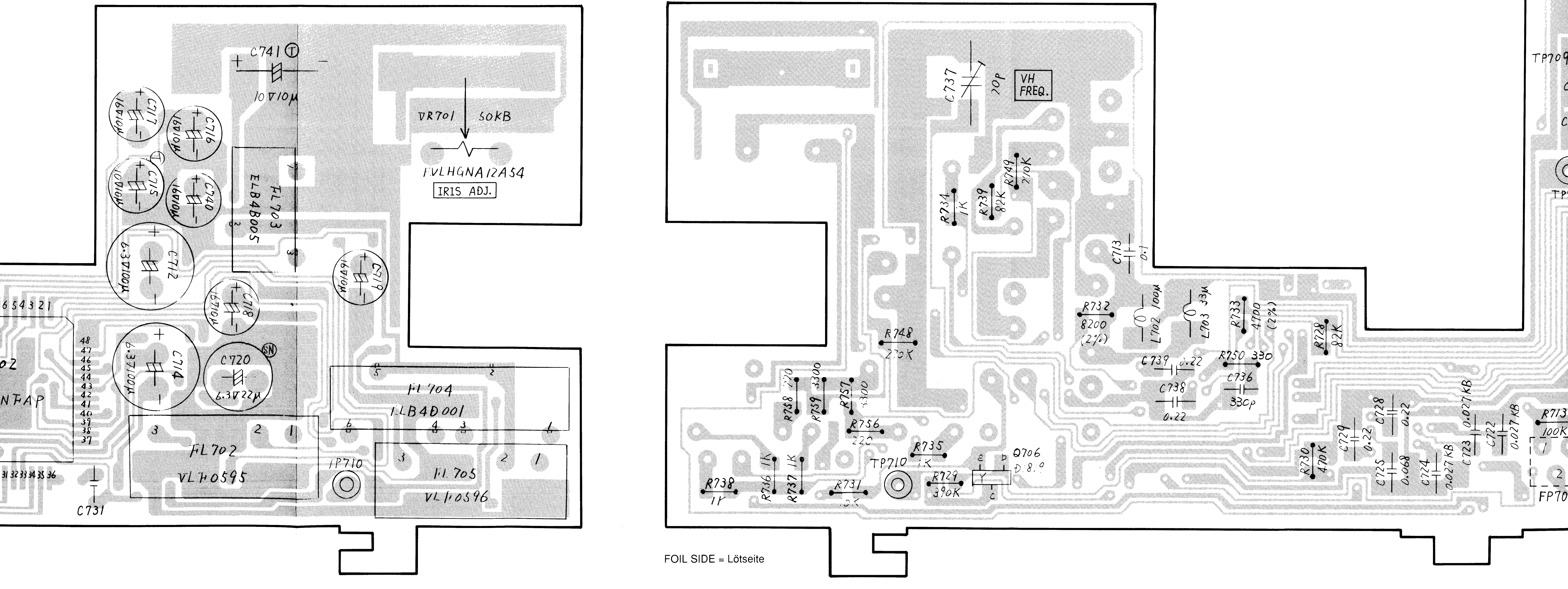
Zoom-Tastenplatine
Zoom SW C.B.A.
WIDE 1
WIDE 2
TELE 2
TELE 1
1
4
3
2
Positions-Sensorplatine Fokus und Zoom
Focus and Zoom Position Detector C.B.A.
1
7
P704
VJP1596T
1 2 3
(ストレート)
P702
VJP1595R
1 2
(ストレート)
C751
6.3V47μ
TP704
C744
6.3V47μ
Q704 A1255
e
c
b
L704 15μ
R753 6800
C753 0.1
C743 0.1
IC704
AN6545SP
TP703
P706
VJP1608T
4 3 2 1
P705
1 2
VJP1595T
TP709
C701
6.3V470μ
R770
TP702
T701
ELTE13K43AY
7
4
9
2
L701 56μ
ELG0436
IC701
MN15867VFK4
R778 150K
C726 0.1
X701
ESX0299
C748
16V10μ
C745
6.3V47μ
W703
TP705
IC705
B701 VJP1948
C742
FL701
ELB4B004
FP701 VJS2112
C721 0.47
C722 2.2
IC702
AN2584NFAP
C731
C741
10V10μ
C717 16V10μ
C716 16V10μ
C715 10V10μ
C740 16V10μ
FL703
ELB4B005
C712 6.3V100μ
C718 16V10μ
C719 16V10μ
C714 6.3V100μ
C720 6.3V22μ
FL702
VLH0595
TP710

COMPONENT SIDE = Bestückungsseite

sorplatine Fokus und Zoom
om Position Detector C.B.A.

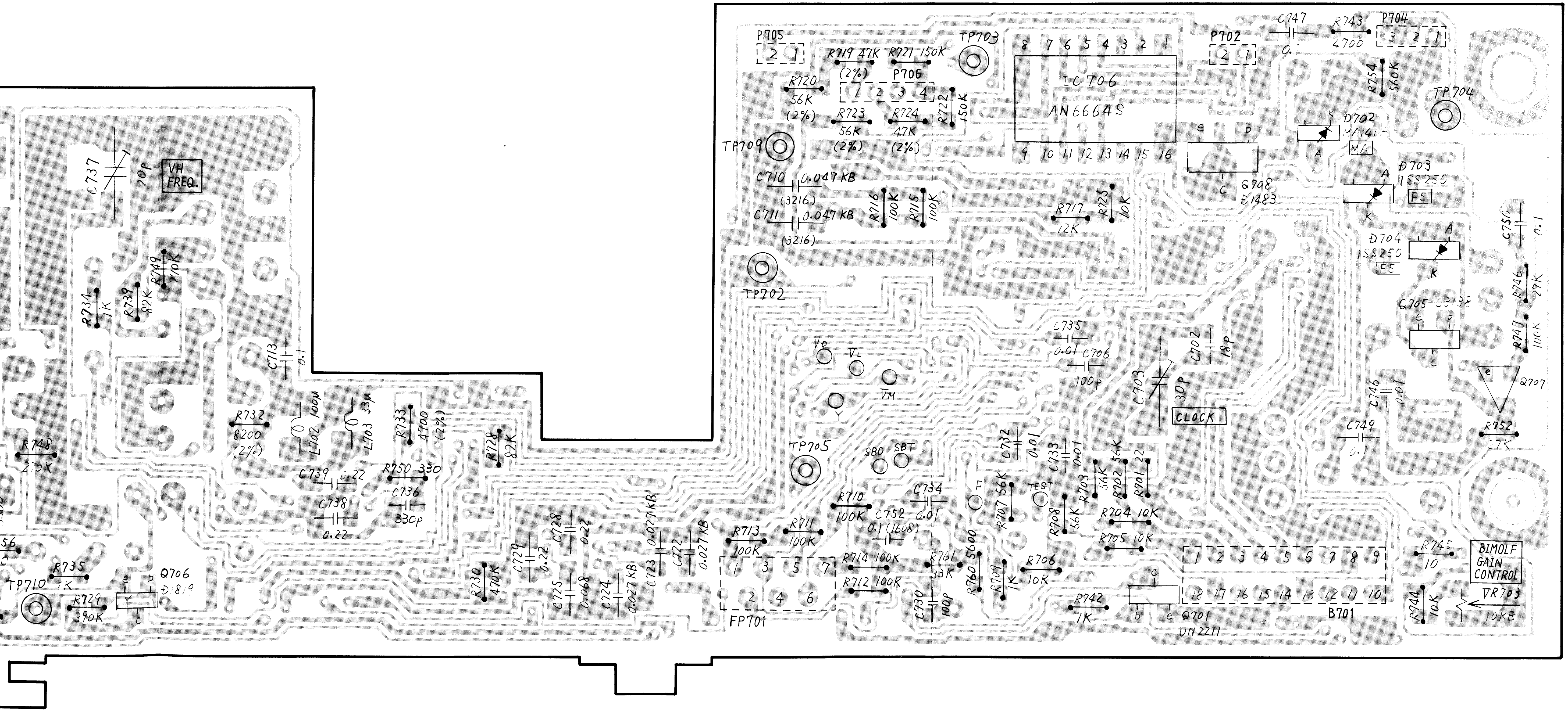


Autofokus-Platine
Auto Focus C.B.A.

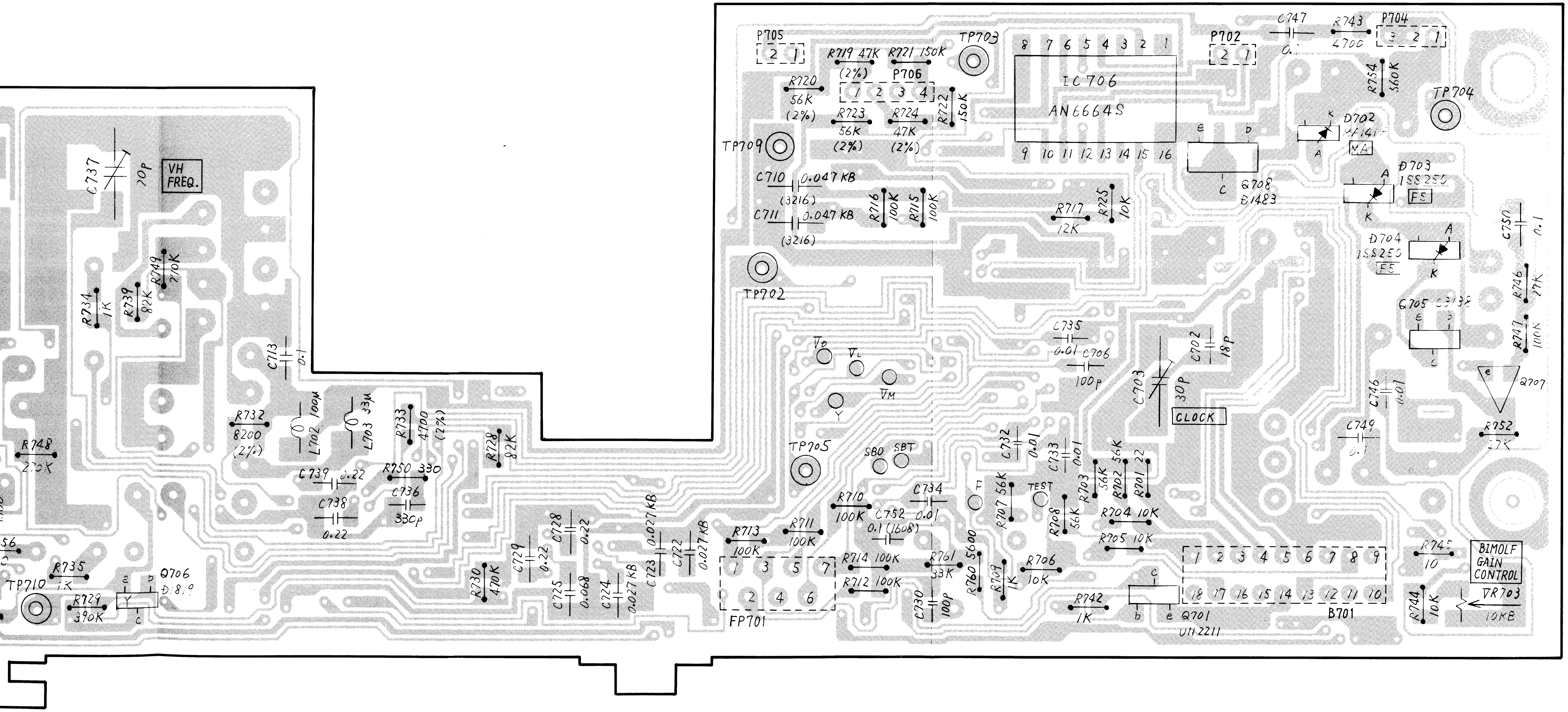

C741
10V10μ
VR701 50KB
EVLHGNA12A54
IRIS ADJ.
C717
C716
C715
C740
16V10μ
FL703
ELB4B005
C712
6.3V100μ
C718
C719
C714
C720
6.3V22μ
FL704
ELB4D001
FL702
VL10595
FL705
VL10596
TP710
C731
NFAP
C737
20P
VH FREQ.
R749 270K
R734 1K
R739 82K
C713 0.1
R732 8200 (2%)
L702 100μ
L703 33μ
R733 4700 (2%)
R728 82K
R748 270K
R758 220
R759 3300
R757 3300
R756 220
R735 1K
Q706
R729 390K
R738 1K
R736 1K
R737 1K
R731 10K
R739
C739 0.22
C738 0.22
R750 330
C736 33CP
R730 470K
C729 0.22
C728 0.22
C725 0.068
C724 0.027KB
C723 0.027KB
C722 0.027KB
R713 100K
TP709
FP70

FOIL SIDE = Lötseite

Autofokus-Platine
Auto Focus C.B.A.

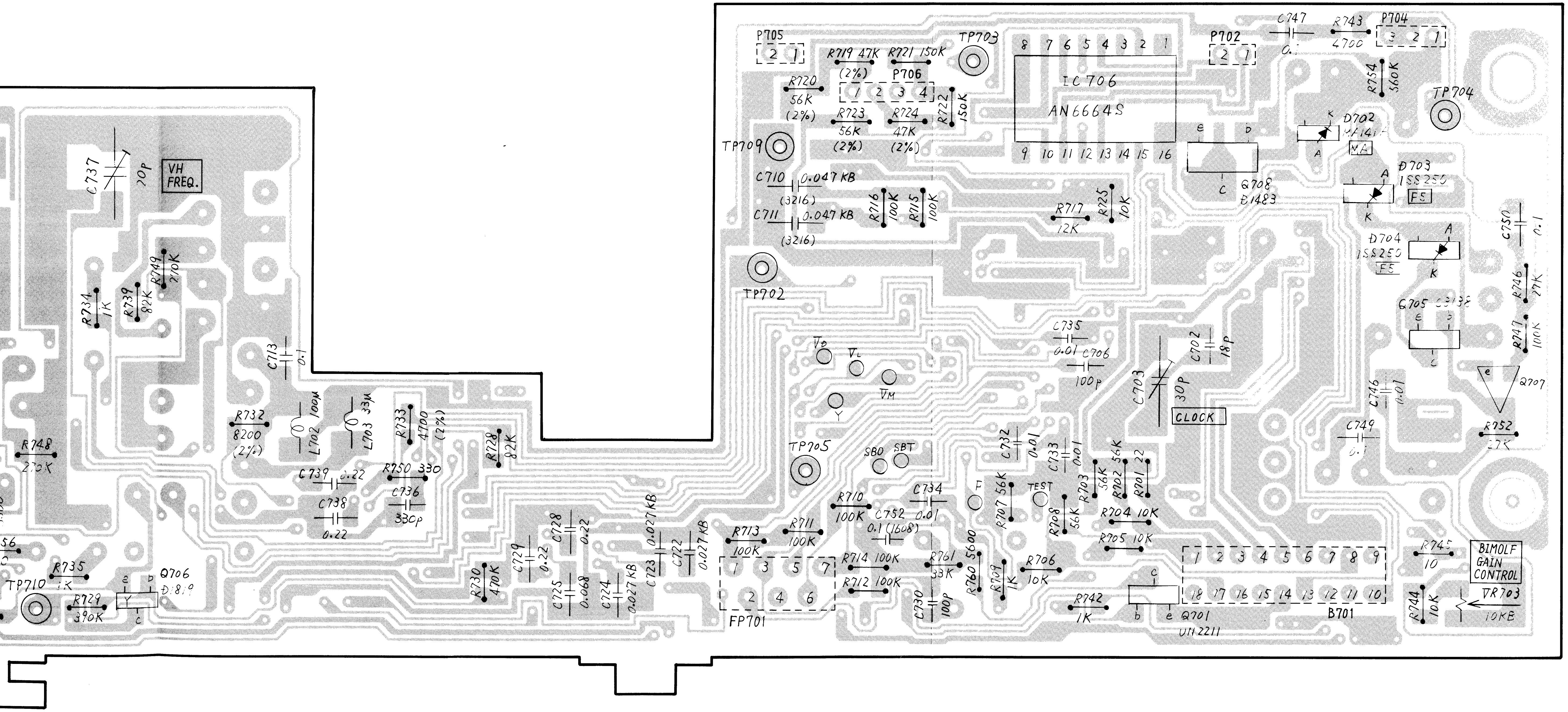

P705
R719 47K
R721 150K
TP703
IC706
AN6664S
P702
C747
R743 4700
P704
R720 56K (2%)
P706
R723 56K (2%)
R724 47K (2%)
R722 150K
R754 560K
TP704
D702
MA
TP709
D703 1SS250
F5
C710 0.047 KB (3216)
C711 0.047 KB (3216)
R716 100K
R715 100K
R717 12K
R725 10K
Q708 B1483
C750 0.1
D704 1SS250
F5
C737 20P
VH FREQ.
TP702
R734 1K
R739 82K
R749 270K
R746 27K
Q705
C735 0.01
C706 100P
C702 18P
C703 30P
CLOCK
R747 100K
C713 0.1
VD
VL
VM
Y
C746 0.01
Q707
R732 8200 (2%)
L702 100µ
L703 33µ
R733 4700 (2%)
R728 82K
C749
R752 27K
R748 270K
TP705
SBO
SBT
C732 0.01
C733 0.01
C739 0.22
R750 330
C736 33P
C738 0.22
C734
F
TEST
R707 56K
R703 56K
R702 56K
R701 22
R710 100K
C752 0.01
0.1 (1608)
R708 56K
R704 10K
R705 10K
C728 0.22
C723 0.027 KB
C722 0.027 KB
R713 100K
R711 100K
Q706
TP710
R735 1K
R729 390K
R730 470K
C729 0.22
C725 0.068
C724 0.027 KB
FP701
R714 100K
R712 100K
R761 33K
R760 5600
C730 100P
R709 1K
R706 10K
R742 1K
Q701 UN2211
B701
R745 10
R744 10K
BIMOLF GAIN CONTROL
VR703 10KB

Autofokus-Platine
Auto Focus C.B.A.



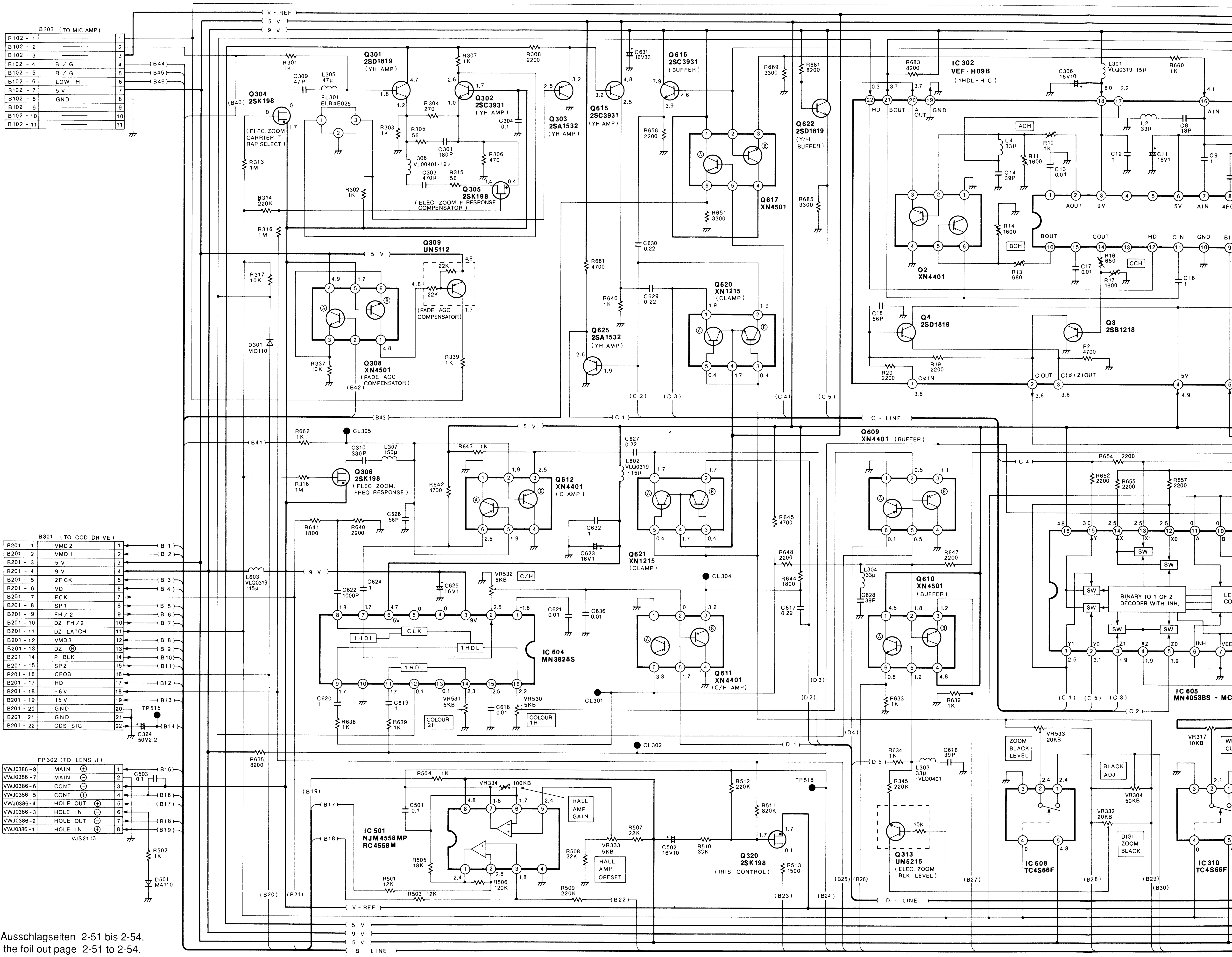
P705
R719 47K
R721 150K
TP703
IC706
AN6664S
P702
C747
R743 4700
P704
R720 56K (2%)
P706
R723 56K (2%)
R724 47K (2%)
R722 150K
R754 560K
TP704
D702
D703 1SS250
F5
TP709
C710 0.047 KB (3216)
C711 0.047 KB (3216)
R716 100K
R715 100K
R717 12K
R725 10K
Q708 D1483
D704 1SS250
F5
C750 0.1
R746 27K
TP702
Q705
R747 100K
Q707
C737 20P
VH FREQ.
R749 270K
R739 82K
R734 1K
C713 0.1
C735 0.01
C706 100P
C702 18P
C703 30P
CLOCK
C746 0.01
C749 0.1
R752 27K
R732 8200 (2%)
L702 100μ
L703 33μ
R733 4700 (2%)
R728 82K
TP705
SBO
SBT
C732 0.01
C733 0.01
R703 56K
R702 56K
R701 22
R748 270K
C739 0.22
C738 0.22
R750 330
C736 330P
R710 100K
C752 0.1 (1608)
C734 0.01
R707 56K
TEST
R708 56K
R704 10K
R705 10K
R735 1K
TP710
R729 390K
Q706 D819
C729 0.22
C728 0.22
C725 0.068
C724 0.027 KB
C723 0.027 KB
C722 0.027 KB
R730 470K
R713 100K
R711 100K
FP701
R714 100K
R712 100K
R761 33K
R760 5600
C730 100P
R709 1K
R706 10K
R742 1K
Q701 UN2211
B701
R745 10
R744 10K
BIMOLF GAIN CONTROL
VR703 10KB

Autofokus-Platine
Auto Focus C.B.A.


P705
P706
P702
P704
R719 47K
R721 150K
(2%)
R720
56K
(2%)
R723
56K
(2%)
R724
47K
(2%)
R722
150K
TP703
TP709
TP702
TP704
TP705
TP710
IC706
AN6664S
C747
0.1
R743
4700
R754
560K
D702
MA
D703
1SS250
F5
D704
1SS250
F5
C750
0.1
R746
27K
R747
100K
Q705
Q707
Q708
D1483
C710 0.047KB
(3216)
C711 0.047KB
(3216)
R716
100K
R715
100K
R717
12K
R725
10K
C735
0.01
C706
100P
C702
18P
C703
30P
CLOCK
C746
0.01
C749
0.1
R752
27K
C737
20P
VH FREQ.
R734
1K
R739
82K
R749
270K
C713
0.1
R732
8200
(2%)
L702
100µ
L703
33µ
R733
4700
(2%)
R728
82K
R748
270K
C739 0.22
C738
0.22
R750 330
C736
33CP
C729
0.22
C728
0.22
C725
0.068
C724
0.027KB
C723
0.027KB
C722
0.027KB
R730
470K
R735
1K
R729
390K
Q706
D819
R713
100K
R711
100K
R710
100K
FP701
R714 100K
R712 100K
C752
0.1 (1608)
C734
0.01
C732
0.01
C733
0.01
R761
33K
R760 5600
C730
100P
R707 56K
R708
56K
R703
56K
R702 56K
R701 22
R709
1K
R706
10K
R704 10K
R705 10K
R742
1K
Q701
UN2211
B701
R745
10
R744
10K
BIMOLF GAIN CONTROL
VR703
10KB
VD
VL
VM
Y
SBO
SBT
F
TEST

Schaltbild des Prozeßteiles
Process Schematic Diagram

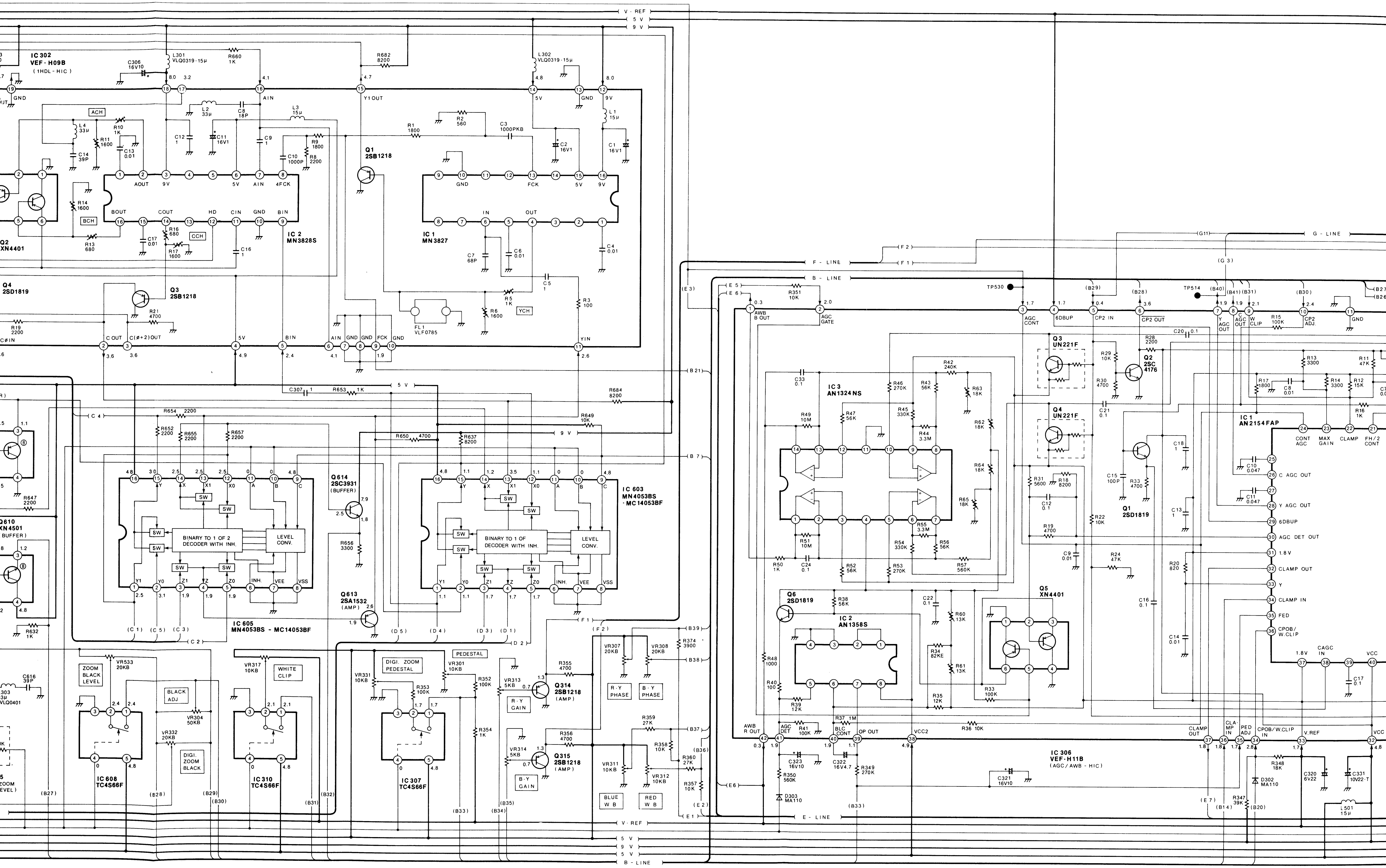
Schaltbild des
Process Schen



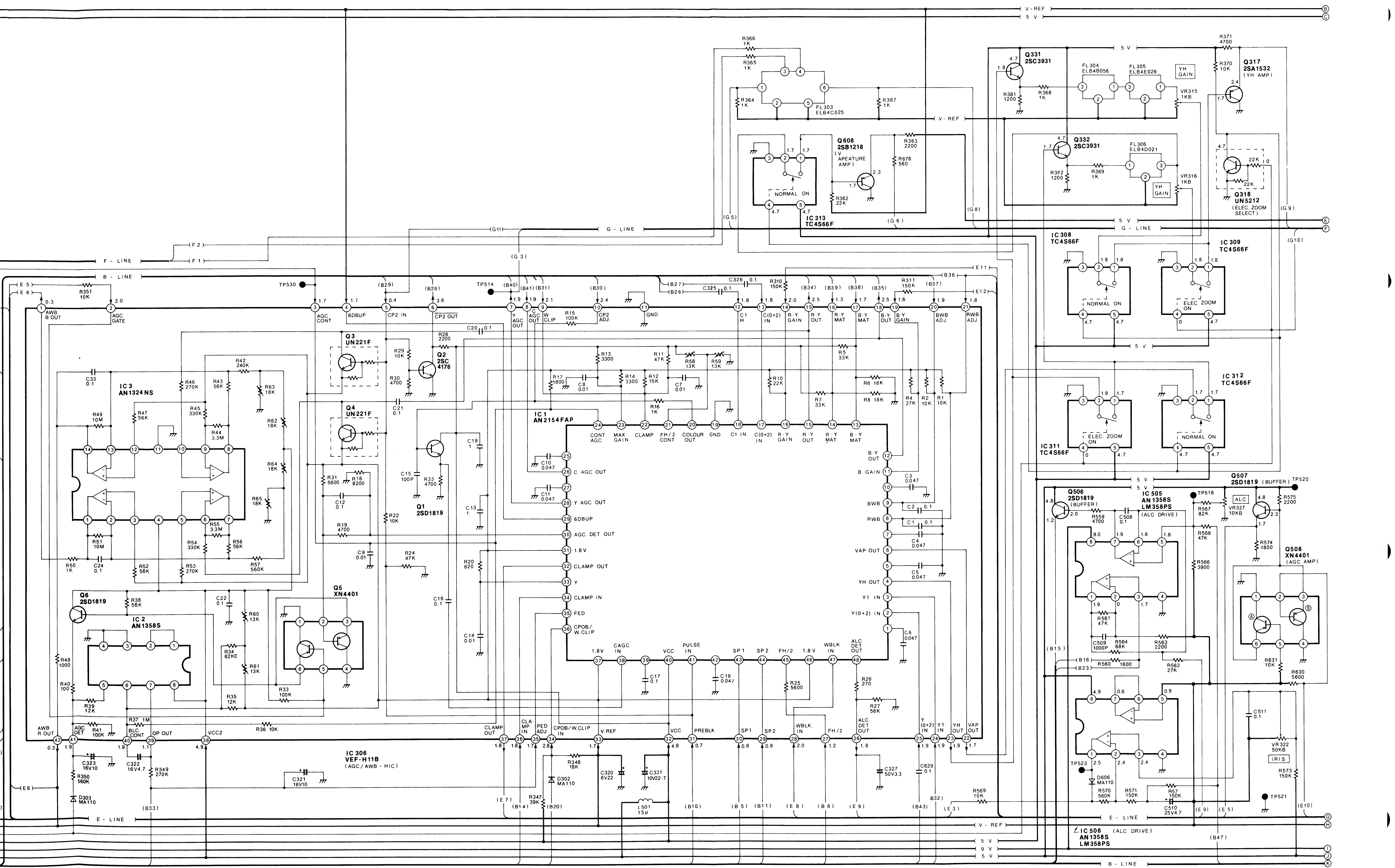
B303 (TO MIC AMP)
B102 - 1 … B102 - 11
B / G
R / G
LOW H
5 V
GND
V - REF
5 V
9 V
Q301 2SD1819 (YH AMP)
Q302 2SC3931 (YH AMP)
Q303 2SA1532 (YH AMP)
Q304 2SK198 (ELEC. ZOOM CARRIER T RAP SELECT)
Q305 2SK198 (ELEC. ZOOM F RESPONSE COMPENSATOR)
FL301 ELB4E025
Q309 UN5112
Q308 XN4501 (FADE AGC COMPENSATOR)
(FADE AGC COMPENSATOR)
D301 MO110
Q615 2SC3931 (YH AMP)
Q616 2SC3931 (BUFFER)
Q617 XN4501
Q622 2SD1819 (Y/H BUFFER)
Q620 XN1215 (CLAMP)
Q625 2SA1532 (YH AMP)
IC 302 VEF-H09B (1HDL-HIC)
HD BOUT A OUT GND AIN
ACH BCH CCH
AOUT 9V 5V AIN
BOUT COUT HD CIN GND
Q2 XN4401
Q4 2SD1819
Q3 2SB1218
C OUT C(ø+2)OUT CøIN
C - LINE
Q306 2SK198 (ELEC ZOOM FREQ. RESPONSE)
CL305
Q612 XN4401 (C AMP)
Q621 XN1215 (CLAMP)
Q609 XN4401 (BUFFER)
Q610 XN4501 (BUFFER)
Q611 XN4401 (C/H AMP)
IC 604 MN3828S
1HDL CLK 1HDL 1HDL
VR532 5KB C/H
VR531 5KB COLOUR 2H
VR530 5KB COLOUR 1H
CL304 CL301 CL302
BINARY TO 1 OF 2 DECODER WITH INH.
SW
IC 605 MN4053BS - MC
B301 (TO CCD DRIVE)
B201 - 1 VMD 2
B201 - 2 VMD 1
B201 - 3 5 V
B201 - 4 9 V
B201 - 5 2F CK
B201 - 6 VD
B201 - 7 FCK
B201 - 8 SP 1
B201 - 9 FH / 2
B201 - 10 DZ FH / 2
B201 - 11 DZ LATCH
B201 - 12 VMD 3
B201 - 13 DZ Ⓗ
B201 - 14 P. BLK
B201 - 15 SP 2
B201 - 16 CPOB
B201 - 17 HD
B201 - 18 -6 V
B201 - 19 15 V
B201 - 20 GND
B201 - 21 GND
B201 - 22 CDS SIG
TP515
FP302 (TO LENS U)
VWJ0386-8 MAIN ⊕
VWJ0386-7 MAIN ⊖
VWJ0386-6 CONT ⊖
VWJ0386-5 CONT ⊕
VWJ0386-4 HOLE OUT ⊕
VWJ0386-3 HOLE IN ⊖
VWJ0386-2 HOLE OUT ⊖
VWJ0386-1 HOLE IN ⊕
VJS2113
D501 MA110
IC 501 NJM4558MP RC4558M
VR334 100KB
HALL AMP GAIN
VR333 5KB HALL AMP OFFSET
Q320 2SK198 (IRIS CONTROL)
TP518
Q313 UN5215 (ELEC ZOOM BLK LEVEL)
D - LINE
ZOOM BLACK LEVEL
VR533 20KB
BLACK ADJ
VR304 50KB
VR332 20KB
DIGI. ZOOM BLACK
IC 608 TC4S66F
IC 310 TC4S66F
VR317 10KB
B - LINE

Darstellung der Prozeßplatine auf den Ausschlagseiten 2-51 bis 2-54.
For the process board diagram refer to the foil out page 2-51 to 2-54.

Schaltbild des Prozeßteiles
Process Schematic Diagram

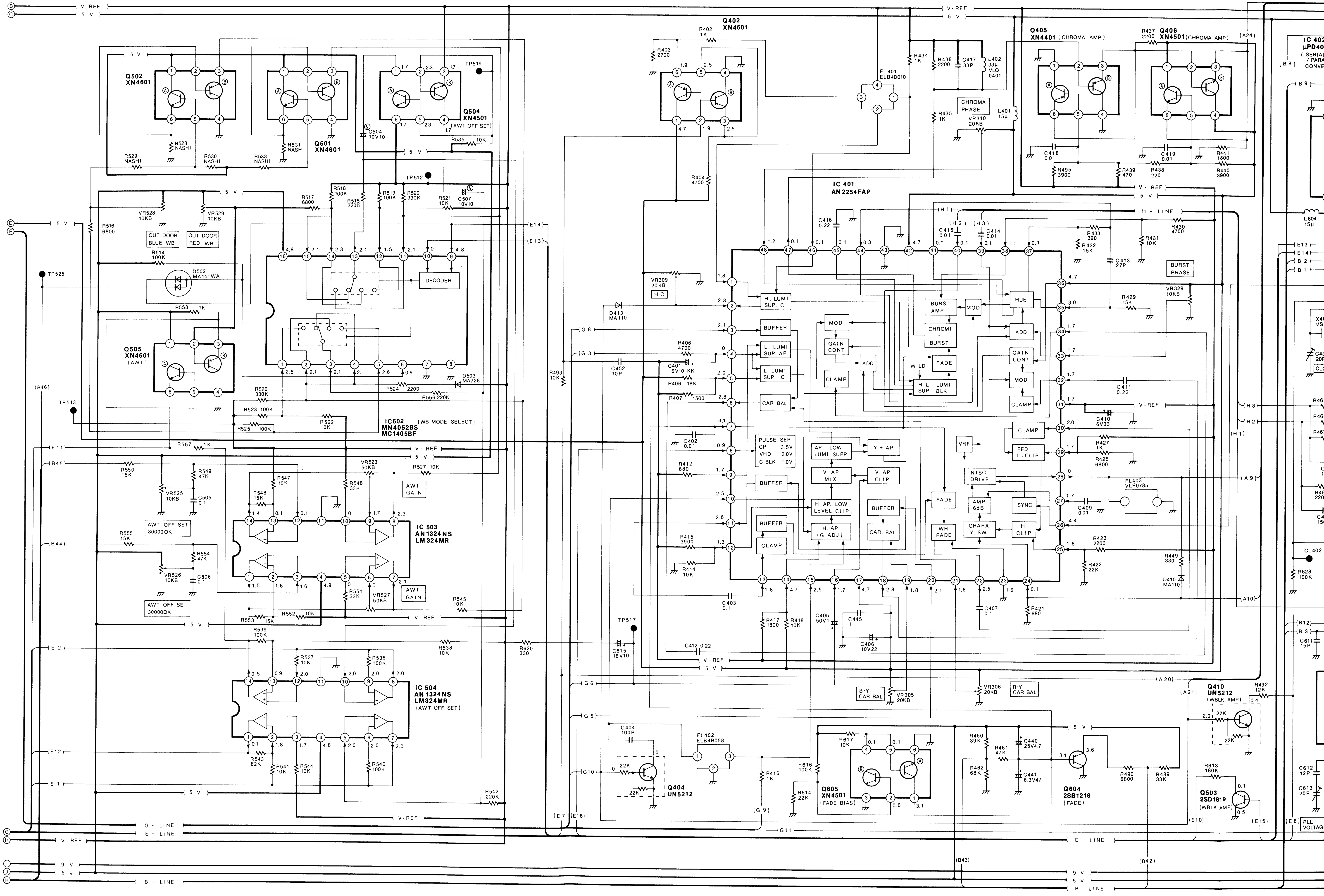

V-REF
5 V
9 V
IC 302
VEF-H09B
(1HDL-HIC)
L301 VLQ0319-15μ
L302 VLQ0319-15μ
Y1 OUT
AIN
ACH
BCH
CCH
YCH
IC 2
MN3828S
IC 1
MN3827
Q1
2SB1218
Q2
XN4401
Q3
2SB1218
Q4
2SD1819
FL1
VLF0785
C OUT
C(φ+2)OUT
5V
BIN
YIN
IC 605
MN4053BS - MC14053BF
IC 603
MN4053BS
· MC14053BF
BINARY TO 1 OF 2 DECODER WITH INH.
LEVEL CONV.
Q614
2SC3931
(BUFFER)
Q613
2SA1532
(AMP)
Q610
XN4501
(BUFFER)
Q314
2SB1218
(AMP)
Q315
2SB1218
(AMP)
IC 608
TC4S66F
IC 310
TC4S66F
IC 307
TC4S66F
ZOOM BLACK LEVEL
BLACK ADJ
WHITE CLIP
DIGI. ZOOM PEDESTAL
PEDESTAL
DIGI. ZOOM BLACK
R-Y GAIN
B-Y GAIN
R-Y PHASE
B-Y PHASE
BLUE W B
RED W B
F - LINE
B - LINE
E - LINE
G - LINE
TP530
TP514
IC 3
AN1324NS
IC 2
AN1358S
Q6
2SD1819
Q5
XN4401
Q3
UN221F
Q4
UN221F
Q1
2SD1819
Q2
2SC4176
IC 1
AN2154FAP
IC 306
VEF-H11B
(AGC/AWB-HIC)
AWB B OUT
AGC GATE
AGC CONT
6DBUP
CP2 IN
CP2 OUT
Y AGC OUT
C AGC OUT
W CLIP
CP2 ADJ.
GND
CONT AGC
MAX GAIN
CLAMP
FH/2 CONT
AGC DET OUT
1.8 V
CLAMP OUT
Y
CLAMP IN
FED
CPOB/W.CLIP
CAGC IN
VCC
AWB R OUT
AGC DET
BLC CONT
OP OUT
VCC2
CLAMP OUT
CLA-MP IN
PED ADJ
CPOB/W.CLIP IN
V.REF
D302 MA110
D303 MA110
L501 15μ

Schaltbild des Prozeßteiles
Process Schematic Diagram

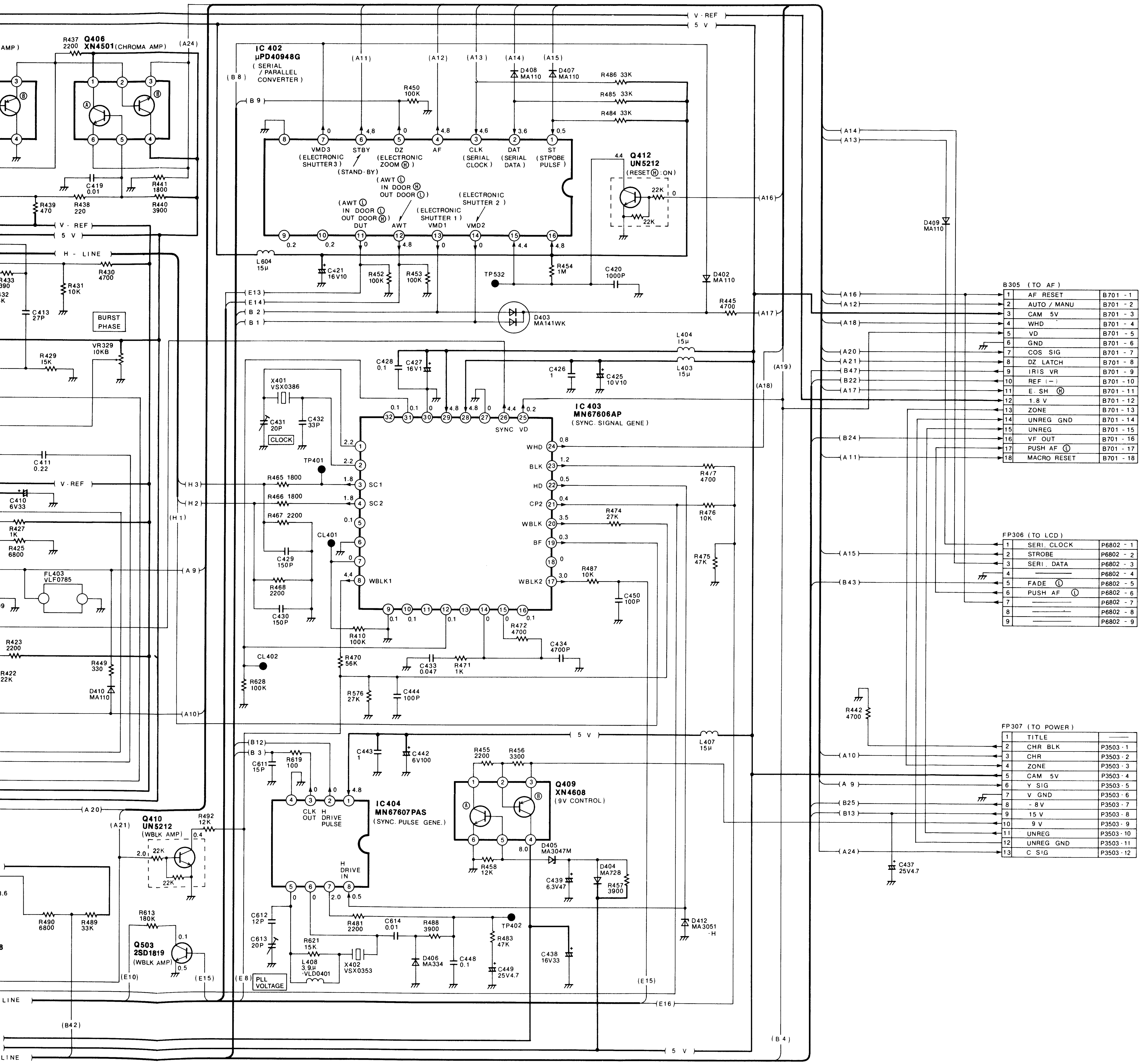


V-REF
5 V
G-LINE
F-LINE
B-LINE
E-LINE
9 V
IC 1 AN2154FAP
IC 2 AN1358S
IC 3 AN1324NS
IC 306 VEF-H11B (AGC/AWB-HIC)
IC 308 TC4S66F
IC 309 TC4S66F
IC 311 TC4S66F
IC 312 TC4S66F
IC 313 TC4S66F
IC 505 AN1358S LM358PS (ALC DRIVE)
IC 506 (ALC DRIVE) AN1358S LM358PS
Q1 2SD1819
Q2 2SC4176
Q3 UN221F
Q4 UN221F
Q5 XN4401
Q6 2SD1819
Q317 2SA1532 (YH AMP)
Q318 UN5212 (ELEC. ZOOM SELECT)
Q331 2SC3931
Q332 2SC3931
Q506 2SD1819 (BUFFER)
Q507 2SD1819 (BUFFER)
Q508 XN4401 (AGC AMP)
Q608 2SB1218 (V APEATURE AMP)
FL303 ELB4C025
FL304 ELB4B056
FL305 ELB4E026
FL306 ELB4D021
YH GAIN
VR315 1KB
VR316 1KB
VR322 50KB
IRIS
VR327 10KB
ALC
NORMAL ON
ELEC. ZOOM ON
TP514
TP516
TP520
TP521
TP523
TP530
AWB B OUT
AGC GATE
AGC CONT
6DBUP
CP2 IN
CP2 OUT
Y AGC OUT
C AGC OUT
W CLIP
CP2 ADJ.
GND
C1 H
C(0+2) IN
R-Y GAIN
R-Y OUT
R-Y MAT
B-Y MAT
B-Y OUT
B-Y GAIN
BWB ADJ
RWB ADJ
CONT AGC
MAX GAIN
CLAMP
FH/2 CONT
COLOUR OUT
C1 IN
B GAIN
BWB
RWB
VAP OUT
YH OUT
Y1 IN
Y(0+2) IN
AGC DET OUT
1.8 V
CLAMP OUT
Y
CLAMP IN
FED
CPOB/W.CLIP
CAGC IN
VCC
PULSE IN
SP1
SP2
WBLK IN
ALC DET OUT
AWB R OUT
AGC DET
BLC CONT
OP OUT
VCC2
CLAMP OUT
CLAMP IN
PED ADJ
CPOB/W.CLIP IN
V.REF
PREBLK
WBLK. IN
FH/2
Y(0+2) IN
Y1 IN
YH OUT
VAP OUT
L501 15μ
D302 MA110
D303 MA110
D606 MA110

Schaltbild des Prozeßteiles
Process Schematic Diagram


V-REF
5 V
Q502 XN4601
Q501 XN4601
Q504 XN4501 (AWT OFF SET)
TP519
C504 10V10
R528 NASHI
R529 NASHI
R530 NASHI
R531 NASHI
R533 NASHI
R535 10K
TP512
R518 100K
R517 6800
R515 220K
R519 100K
R520 330K
R521 10K
C507 10V10
VR528 10KB
VR529 10KB
OUT DOOR BLUE WB
OUT DOOR RED WB
R516 6800
R514 100K
D502 MA141WA
TP525
R558 1K
DECODER
Q505 XN4601 (AWT)
D503 MA728
R524 2200
R556 220K
R526 330K
R523 100K
R525 100K
R522 10K
IC502 (WB MODE SELECT) MN4052BS MC1405BF
TP513
R557 1K
R550 15K
R549 47K
VR525 10KB
C505 0.1
AWT OFF SET 30000OK
R555 15K
R554 47K
VR526 10KB
C506 0.1
R547 10K
R548 15K
VR523 50KB
R546 33K
R527 10K
AWT GAIN
IC 503 AN1324NS LM324MR
R551 33K
VR527 50KB
R545 10K
R553 15K
R552 10K
R539 100K
R537 10K
R536 100K
R538 10K
R620 330
IC 504 AN1324NS LM324MR (AWT OFF SET)
R543 82K
R541 10K
R544 10K
R540 100K
R542 220K
G-LINE
E-LINE
9 V
B-LINE
Q402 XN4601
R402 1K
R403 2700
R404 4700
FL401 ELB4D010
R434 1K
R436 2200
C417 33P
L402 33μ VLQ 0401
CHROMA PHASE
VR310 20KB
R435 1K
L401 15μ
IC 401 AN2254FAP
C416 0.22
H-LINE
C415 0.01
C414 0.01
R433 390
R432 15K
R431 10K
R430 4700
C413 27P
BURST PHASE
VR329 10KB
R429 15K
VR309 20KB
HC
D413 MA110
R406 4700
C401 16V10-KK
R406 18K
R407 1500
C452 10P
R493 10K
C402 0.01
R412 680
R415 3900
R414 10K
C403 0.1
H. LUMI SUP. C
BUFFER
L. LUMI SUP. AP
L. LUMI SUP. C
CAR. BAL
PULSE SEP CP 3.5V VHD 2.0V C.BLK 1.0V
MOD
GAIN CONT
CLAMP
ADD
AP. LOW LUMI. SUPP.
Y + AP
V. AP MIX
V. AP CLIP
H. AP LOW LEVEL CLIP
H. AP (G. ADJ)
BURST AMP
CHROMI + BURST
WILD
FADE
H. L. LUMI SUP. BLK
HUE
VRF
NTSC DRIVE
AMP 6dB
SYNC
CHARA Y. SW
H CLIP
WH FADE
PED L. CLIP
C411 0.22
C410 6V33
R427 1K
R425 6800
FL403 VLF0785
C409 0.01
R423 2200
R422 22K
R449 330
D410 MA110
R417 1800
R418 10K
C405 50V1
C445 1
C406 10V22
C407 0.1
R421 680
TP517
C615 16V10
C412 0.22
B-Y CAR BAL
VR305 20KB
VR306 20KB
R-Y CAR BAL
C404 100P
FL402 ELB4B058
Q404 UN5212
R416 1K
R616 100K
R614 22K
R617 10K
Q605 XN4501 (FADE BIAS)
R460 39K
R461 47K
C440 25V4.7
R462 68K
C441 6.3V47
Q604 2SB1218 (FADE)
R490 6800
R489 33K
Q405 XN4401 (CHROMA AMP)
R437 2200
Q406 XN4501 (CHROMA AMP)
C418 0.01
R495 3900
R439 470
R438 220
C419 0.01
R441 1800
R440 3900
Q410 UN5212 (WBLK AMP)
R492 12K
R613 180K
Q503 2SD1819 (WBLK AMP)
IC 402 μPD40
L604 15μ
CL402
R628 100K
C611 15P
C612 12P
C613 20P
PLL VOLTAGE

Schaltbild des Prozeßteiles
Process Schematic Diagram


R437 2200
Q406 XN4501 (CHROMA AMP)
IC 402 µPD40948G (SERIAL / PARALLEL CONVERTER)
VMD3 (ELECTRONIC SHUTTER 3)
STBY (STAND-BY)
DZ (ELECTRONIC ZOOM Ⓗ)
AF
CLK (SERIAL CLOCK)
DAT (SERIAL DATA)
ST (STROBE PULSE)
AWT
VMD1
VMD2
DUT
D408 MA110
D407 MA110
R486 33K
R485 33K
R484 33K
R450 100K
Q412 UN5212 (RESET Ⓗ : ON)
L604 15µ
C421 16V10
R452 100K
R453 100K
TP532
R454 1M
C420 1000P
D402 MA110
R445 4700
D403 MA141WK
D409 MA110
BURST PHASE
VR329 10KB
R429 15K
X401 VSX0386
C431 20P
C432 33P
CLOCK
C428 0.1
C427 16V1
C426 1
C425 10V10
L404 15µ
L403 15µ
IC 403 MN67606AP (SYNC. SIGNAL GENE)
SYNC VD
WHD
BLK
HD
CP2
WBLK
BF
WBLK2
SC1
SC2
WBLK1
TP401
R465 1800
R466 1800
R467 2200
CL401
C429 150P
R468 2200
C430 150P
R410 100K
R472 4700
C434 4700P
R477 4700
R474 27K
R476 10K
R475 47K
R487 10K
C450 100P
CL402
R628 100K
R470 56K
C433 0.047
R471 1K
R576 27K
C444 100P
C411 0.22
C410 6V33
R427 1K
R425 6800
FL403 VLF0785
R423 2200
R422 22K
R449 330
D410 MA110
C611 15P
R619 100
IC404 MN67607PAS (SYNC. PULSE GENE.)
CLK OUT
H DRIVE PULSE
H DRIVE IN
C443 1
C442 6V100
R455 2200
R456 3300
Q409 XN4608 (9V CONTROL)
D405 MA3047M
R458 12K
D404 MA728
C439 6.3V47
R457 3900
L407 15µ
Q410 UN5212 (WBLK AMP)
R492 12K
R613 180K
Q503 2SD1819 (WBLK AMP)
R490 6800
R489 33K
C612 12P
C613 20P
R621 15K
L408 3.9µ VLD0401
X402 VSX0353
PLL VOLTAGE
R481 2200
C614 0.01
R488 3900
D406 MA334
C448 0.1
TP402
R483 47K
C449 25V4.7
C438 16V33
D412 MA3051-H
R442 4700
C437 25V4.7
V · REF
5 V
H - LINE
LINE

B305 (TO AF)

1	AF RESET	B701 - 1
2	AUTO / MANU	B701 - 2
3	CAM 5V	B701 - 3
4	WHD	B701 - 4
5	VD	B701 - 5
6	GND	B701 - 6
7	COS SIG	B701 - 7
8	DZ LATCH	B701 - 8
9	IRIS VR	B701 - 9
10	REF (−)	B701 - 10
11	E. SH Ⓗ	B701 - 11
12	1.8 V	B701 - 12
13	ZONE	B701 - 13
14	UNREG GND	B701 - 14
15	UNREG	B701 - 15
16	VF OUT	B701 - 16
17	PUSH AF Ⓛ	B701 - 17
18	MACRO RESET	B701 - 18

FP306 (TO LCD)

1	SERI. CLOCK	P6802 - 1
2	STROBE	P6802 - 2
3	SERI. DATA	P6802 - 3
4	———	P6802 - 4
5	FADE Ⓛ	P6802 - 5
6	PUSH AF Ⓛ	P6802 - 6
7	———	P6802 - 7
8	———	P6802 - 8
9	———	P6802 - 9

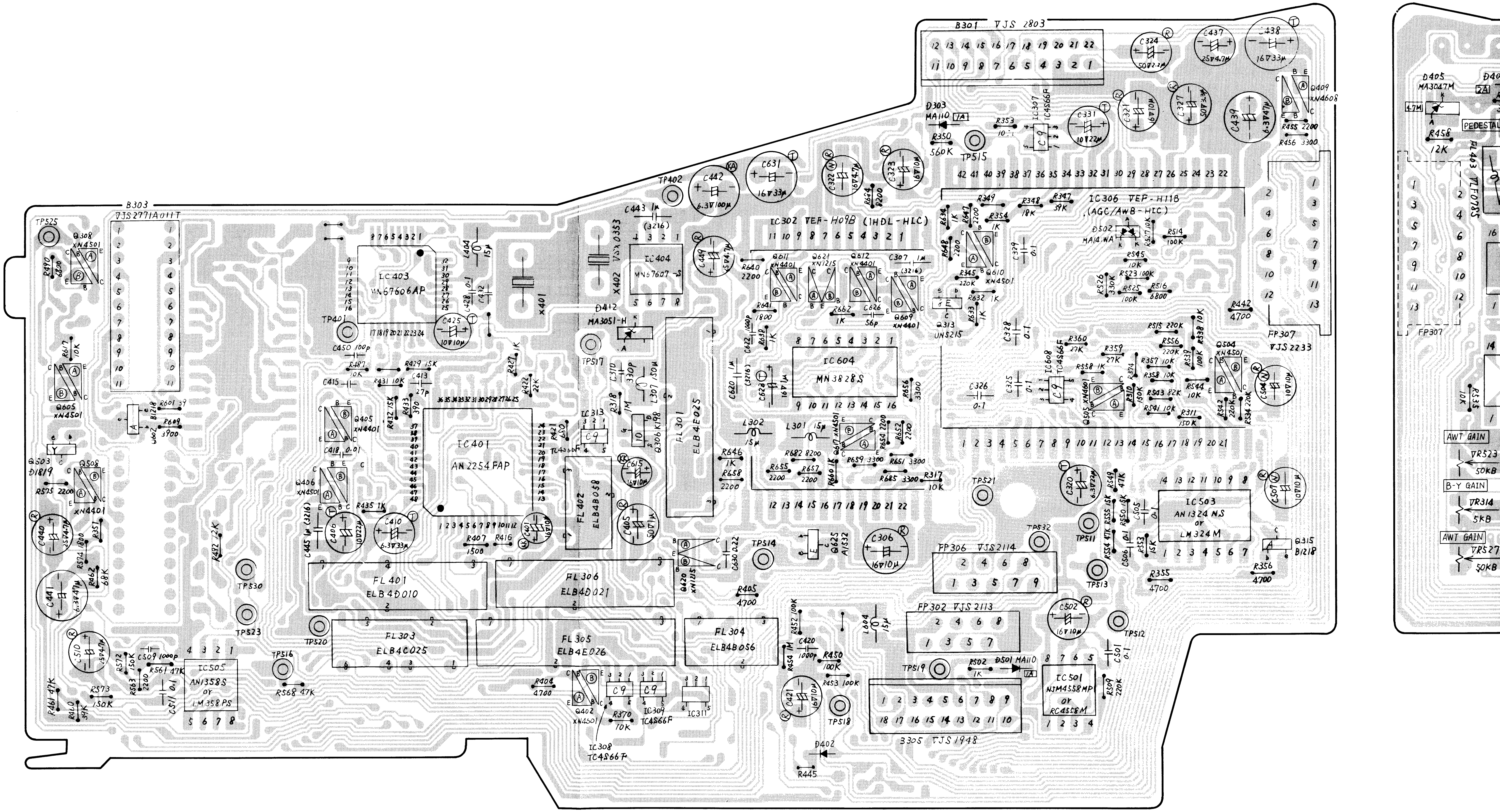
FP307 (TO POWER)

1	TITLE	———
2	CHR BLK	P3503 - 1
3	CHR	P3503 - 2
4	ZONE	P3503 - 3
5	CAM 5V	P3503 - 4
6	Y SIG	P3503 - 5
7	V GND	P3503 - 6
8	- 8 V	P3503 - 7
9	15 V	P3503 - 8
10	9 V	P3503 - 9
11	UNREG	P3503 - 10
12	UNREG GND	P3503 - 11
13	C SIG	P3503 - 12

Für Werte ohne Bezeichnung F (µF) oder Ω einsetzen.
Read F (µF) or Ω respectively unless otherwise noted.

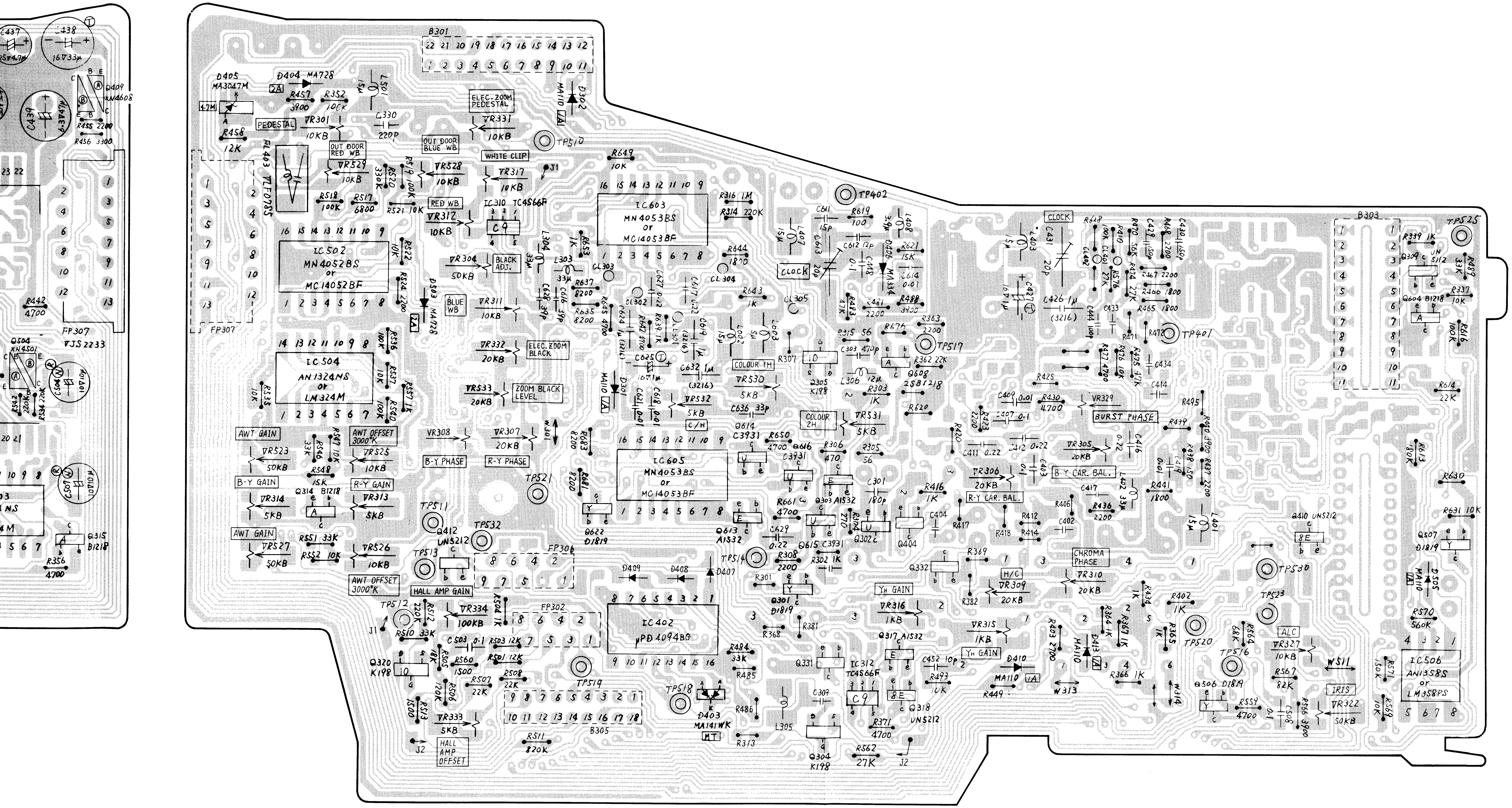
Darstellung der Prozeßplatine auf den Ausschlagseiten 2-51 bis 2-54.
For the process board diagram refer to the foil out page 2-51 to 2-54.

Prozeßplatine
Process C.B.A.


B303
VJS2771A011T
B301 VJS 2803
TP525
Q308 XN4501
R490 6800
Q605 XN4501
R617 10K
R601 39
R609 3900
B1218
Q503 D1819
Q508 XN4401
R575 2200
C440
C441 6.3V47μ
R574 1800
R351
R462 68K
R492 12K
C510
R572 150K
C509 1000p
R561 47K
R563 2200
C511 0.1
R573 150K
R461 47K
R410 39K
IC505 AN1358S or LM358PS
TP530
TP523
TP516
R568 47K
TP520
IC403 MN67606AP
TP401
C450 100p
C425 10V10μ
C404 15μ
C428 0.1
C432
X401
R487 10K
R429 15K
C413 27p
C415
R431 10K
Q405 XN4401
R432 15K
R433 390
C418 0.01
Q406 XN4501
IC401 AN2254FAP
R435 1K
C445 1μ (3216)
C406 10V22μ
C410 6.3V33μ
C401 16V10μ
R407 1500
R416
R421
R422 22K
R427 1K
FL401 ELB4D010
FL303 ELB4C025
FL306 ELB4D021
FL305 ELB4E026
FL304 ELB4B056
TP402
C443 1μ (3216)
X402 VSX0353
IC404 MN67607-S
D412 MA3051-H
TP517
C310 330p
L307 150μ
R318 1M
IC313 TC4S66F
Q306 K198
FL402 ELB4B058
C615 16V10μ
C405 50V1μ
FL301 ELB4E025
C442 6.3V100μ
C631 16V33μ
C449 35V4.7μ
C322 6V47μ
C323 16V10μ
R624 8200
IC302 VEF-H09B (IHDL-HLC)
R640 2200
Q611 XN4401
Q621 XN1215
Q612 XN4401
C307 1M (3216)
Q609 XN4401
R641 1800
R662 1K
C626 56p
C622 100p
R639 1K
C620 1M (3216)
C623 16V1μ
IC604 MN3828S
R656 3300
L302 15μ
L301 15μ
Q617 XN4501
R654 2200
R652 2200
R646 1K
R658 2200
R682 8200
R655 2200
R657 2200
R659 3300
R651 3300
R660 1K
R685 3300
R317 10K
TP514
Q620 XN1215
C630 0.22
Q625 A1532
C306 16V10μ
R405 4700
L604 15μ
R452 100K
C420 1000p
R450 100K
R454 1M
R453 100K
C421 16V10μ
TP518
D402
R445
Q402 XN4501
R404 4700
R370 10K
IC309 TC4S66F
IC308 TC4S66F
IC311
D303 MA110
R350 560K
R353 10
TP515
IC307 TC4S66F
C324 50V2.2μ
C437 25V4.7μ
C438 16V33μ
C331 10V22μ
C321 16V10μ
C327 50V3.3μ
C439 6.3V47μ
Q409 XN4608
R455 2200
R456 3300
IC306 VEF-H11B (AGC/AWB-HLC)
R349
R348 18K
R347 39K
R354 1K
R634 1K
R647 2200
R648 2200
Q610 XN4501
C329 0.1
D502 MA14WA
R517 10K
R514 100K
R545 10K
R345 220K
R632 1K
R633 1K
Q313 UN5215
R526 330K
R523 100K
R525 100K
R516 6800
R442 4700
C328 0.1
R515 220K
R538 10K
R556 220K
R360 27K
R359 27K
IC608 TC4S66F
R358 1K
R357 10K
R358 10K
R539 100K
R544 10K
Q504 XN4501
C504 16V10μ
C326 0.1
C325 0.1
Q505 XN4601
R310 150K
R543 82K
R541 10K
R311 150K
R542 220K
R334 220K
FP307 VJS 2233
TP521
C320 6.3V22μ
R549 47K
R555 15K
R550 1K
C505 0.1
IC503 AN1324NS or LM324M
C507 16V10μ
Q315 B1218
TP511
R554 47K
C506 0.1
R553 15K
TP532
FP306 VJS2114
TP513
R355 4700
R356 4700
FP302 VJS2113
C502 16V10μ
TP512
TP519
R502 1K
D501 MA110
C501 0.1
IC501 NJM4558MP or RC4558M
R509 220K
3305 VJS1948
D405 MA3047M
R458 12K
PEDESTAL
FL403 TLF078S
FP307
AWT GAIN
VR523 50KB
B-Y GAIN
VR314 5KB
AWT GAIN
VR527 50KB
R335

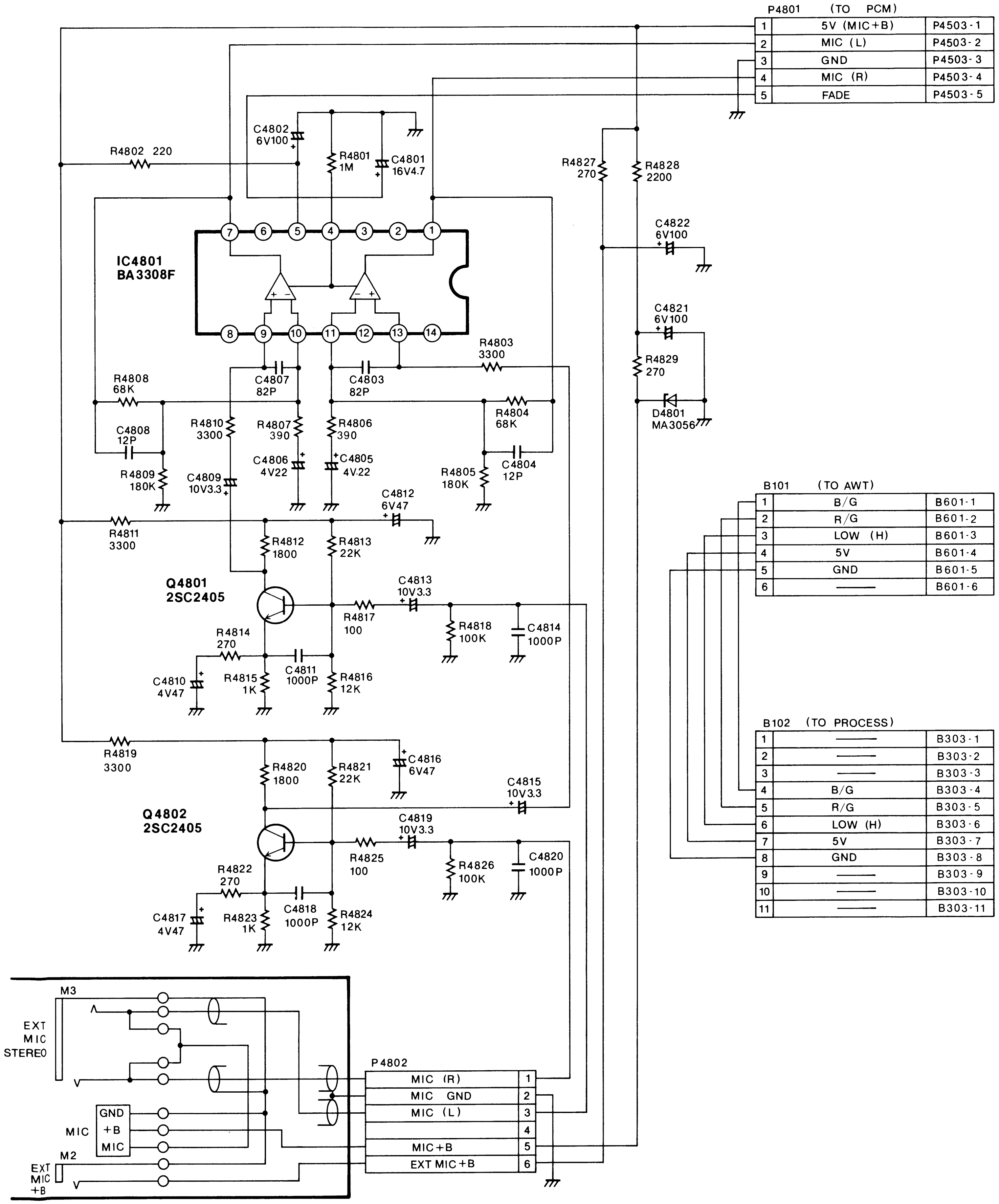
COMPONENT SIDE = Bestückungsseite

Prozeßplatine
Process C.B.A.

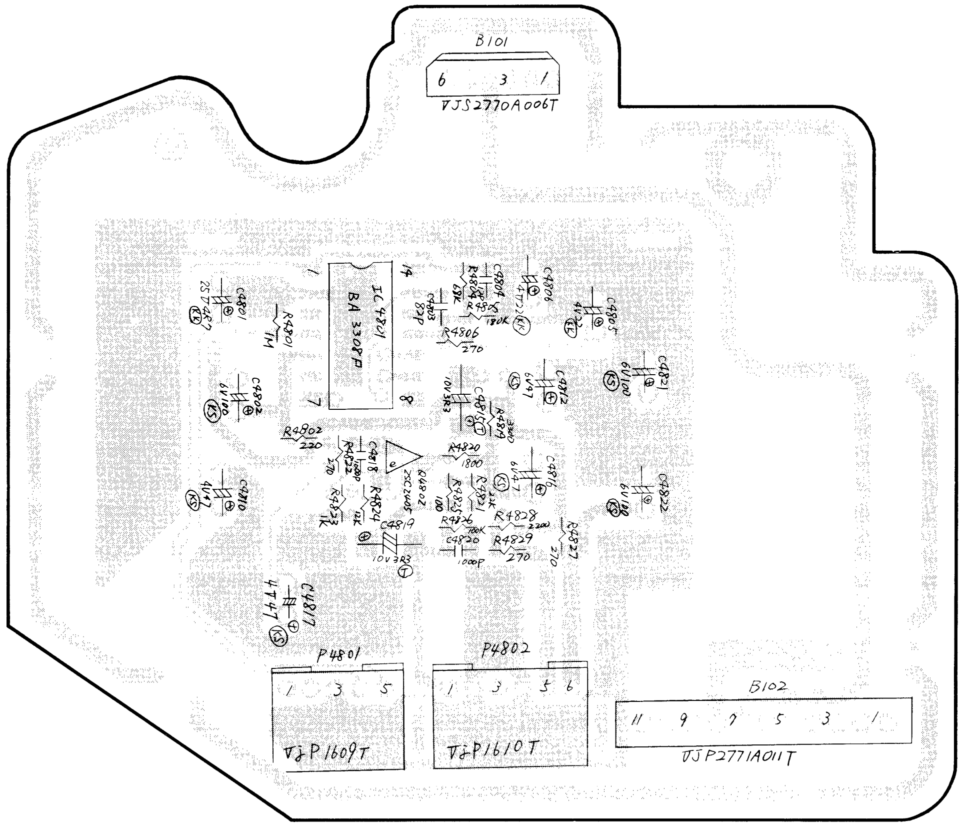

B301
IC502
MN4052BS or MC14052BF
IC504
AN1324NS or LM324M
IC603
MN4053BS or MC14053BF
IC605
MN4053BS or MC14053BF
IC402
μPD4094BG
IC310 TC4S66F
IC312 TC4S66F
IC506
AN1358S or LM358PS
B303
B305
FP302
FP306
FP307
PEDESTAL
OUT DOOR RED WB
OUT DOOR BLUE WB
WHITE CLIP
ELEC. ZOOM PEDESTAL
RED WB
BLACK ADJ.
BLUE WB
ELEC. ZOOM BLACK
ZOOM BLACK LEVEL
AWT GAIN
AWT OFFSET 3000°K
B-Y GAIN
R-Y GAIN
B-Y PHASE
R-Y PHASE
HALL AMP GAIN
HALL AMP OFFSET
COLOUR 1H
COLOUR 2H
C/H
CLOCK
BURST PHASE
B-Y CAR. BAL.
R-Y CAR. BAL.
CHROMA PHASE
H/C
YH GAIN
ALC
IRIS
TP510
TP402
TP517
TP401
TP525
TP521
TP511
TP532
TP513
TP512
TP514
TP519
TP518
TP530
TP523
TP520
TP516
D403 MA141WK
D410 MA110

FOIL SIDE = Lötseite

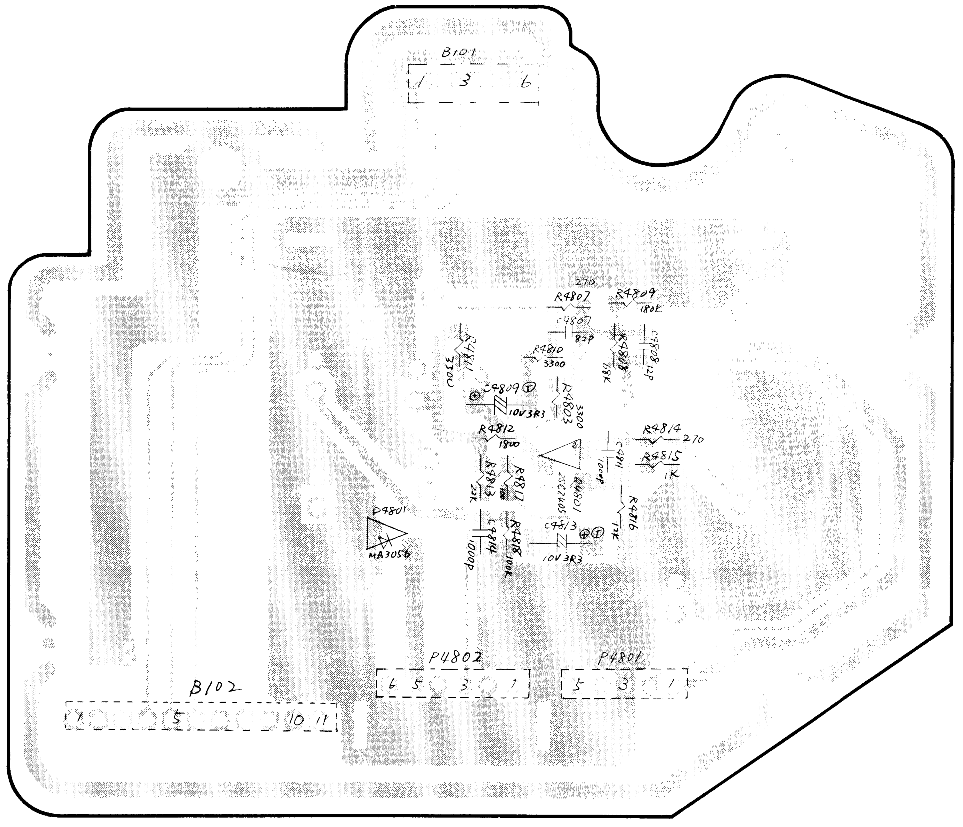
Schaltbild des Mikrofonverstärkers
Mic. Amplifier Schematic Diagram


P4801 (TO PCM)
1 5V (MIC+B) P4503-1
2 MIC (L) P4503-2
3 GND P4503-3
4 MIC (R) P4503-4
5 FADE P4503-5
IC4801
BA3308F
R4802 220
C4802 6V100
R4801 1M
C4801 16V4.7
R4827 270
R4828 2200
C4822 6V100
C4821 6V100
R4829 270
D4801 MA3056
R4803 3300
R4808 68K
C4807 82P
C4803 82P
R4804 68K
C4808 12P
R4810 3300
R4807 390
R4806 390
C4804 12P
R4809 180K
C4809 10V3.3
C4806 4V22
C4805 4V22
R4805 180K
C4812 6V47
R4811 3300
R4812 1800
R4813 22K
Q4801 2SC2405
C4813 10V3.3
R4817 100
R4818 100K
C4814 1000P
R4814 270
C4811 1000P
C4810 4V47
R4815 1K
R4816 12K
R4819 3300
R4820 1800
R4821 22K
C4816 6V47
C4815 10V3.3
Q4802 2SC2405
C4819 10V3.3
R4825 100
R4826 100K
C4820 1000P
R4822 270
C4818 1000P
C4817 4V47
R4823 1K
R4824 12K
B101 (TO AWT)
1 B/G B601-1
2 R/G B601-2
3 LOW (H) B601-3
4 5V B601-4
5 GND B601-5
6 —— B601-6
B102 (TO PROCESS)
1 —— B303-1
2 —— B303-2
3 —— B303-3
4 B/G B303-4
5 R/G B303-5
6 LOW (H) B303-6
7 5V B303-7
8 GND B303-8
9 —— B303-9
10 —— B303-10
11 —— B303-11
M3
EXT MIC STEREO
MIC
GND
+B
MIC
M2
EXT MIC +B
P4802
1 MIC (R)
2 MIC GND
3 MIC (L)
4
5 MIC+B
6 EXT MIC+B

Mikrofon-Verstärkerplatine
Mic. Amplifier C.B.A.

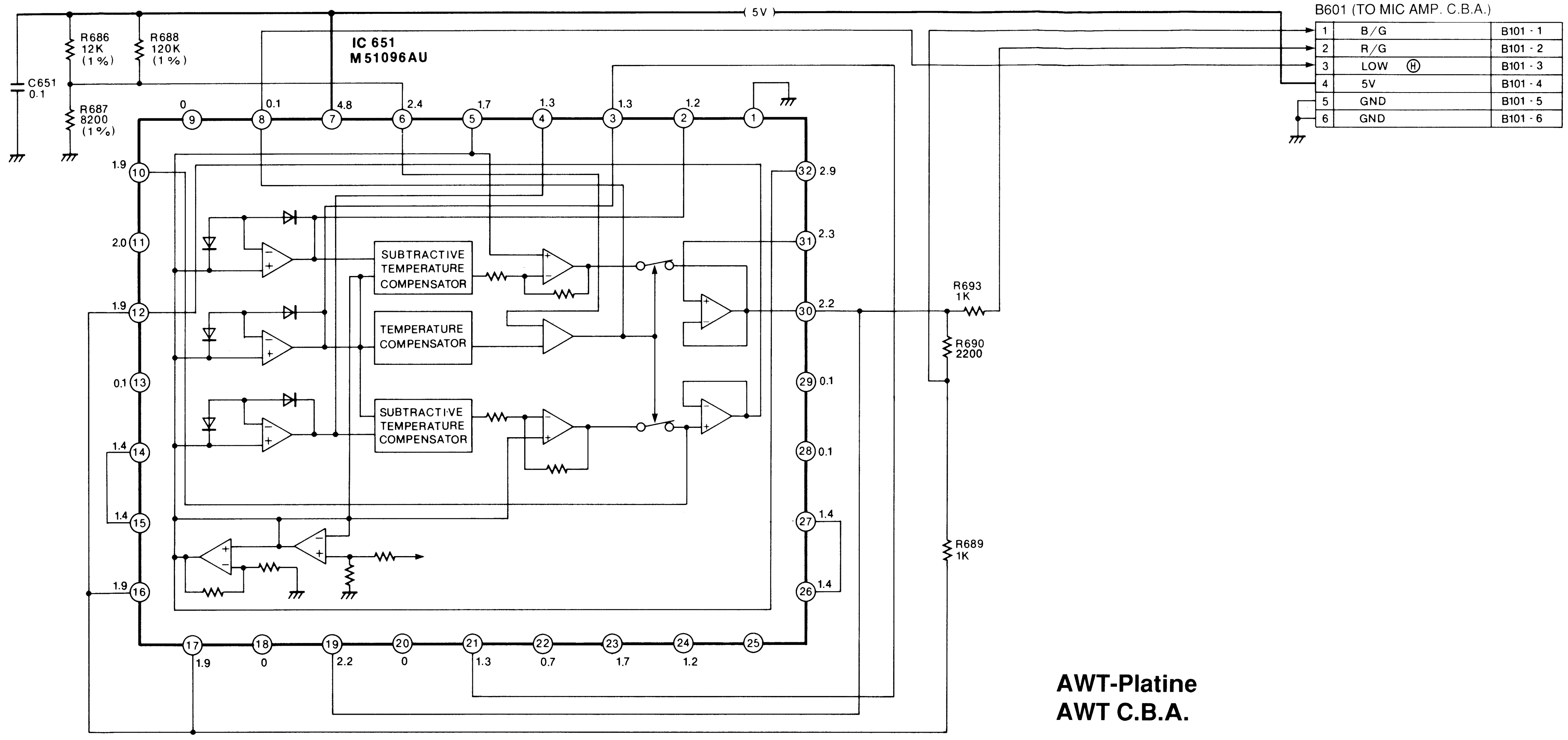

B101
6 3 1
VJS2770A006T
IC4801
BA3308P
P4801
P4802
B102
VJP1609T
VJP1610T
VJP2771A011T
11 9 7 5 3 1

COMPONENT SIDE = Bestückungsseite


B101
1 3 6
P4802
P4801
B102
D4801
MA3056

FOIL SIDE = Lötseite

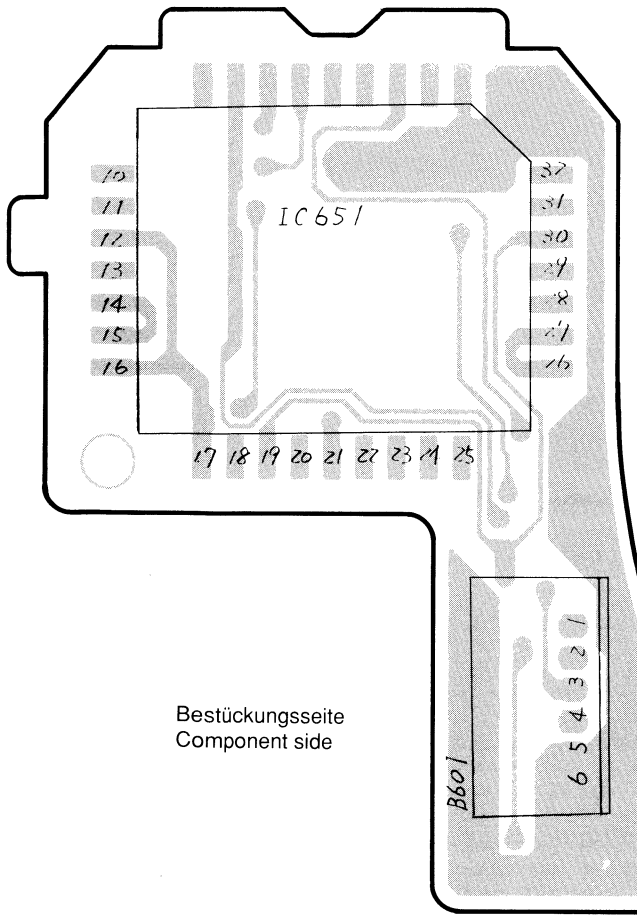
Schaltbild des AWT-Teiles
AWT Schematic Diagram


5V
R686
12K
(1%)
R688
120K
(1%)
C651
0.1
R687
8200
(1%)
IC 651
M51096AU
0
0.1
4.8
2.4
1.7
1.3
1.3
1.2
1.9
2.0
1.9
0.1
1.4
1.4
1.9
2.9
2.3
2.2
0.1
0.1
1.4
1.4
1.9
0
2.2
0
1.3
0.7
1.7
1.2
SUBTRACTIVE
TEMPERATURE
COMPENSATOR
TEMPERATURE
COMPENSATOR
SUBTRACTIVE
TEMPERATURE
COMPENSATOR
R693
1K
R690
2200
R689
1K
B601 (TO MIC AMP. C.B.A.)
1 B/G B101 - 1
2 R/G B101 - 2
3 LOW Ⓗ B101 - 3
4 5V B101 - 4
5 GND B101 - 5
6 GND B101 - 6

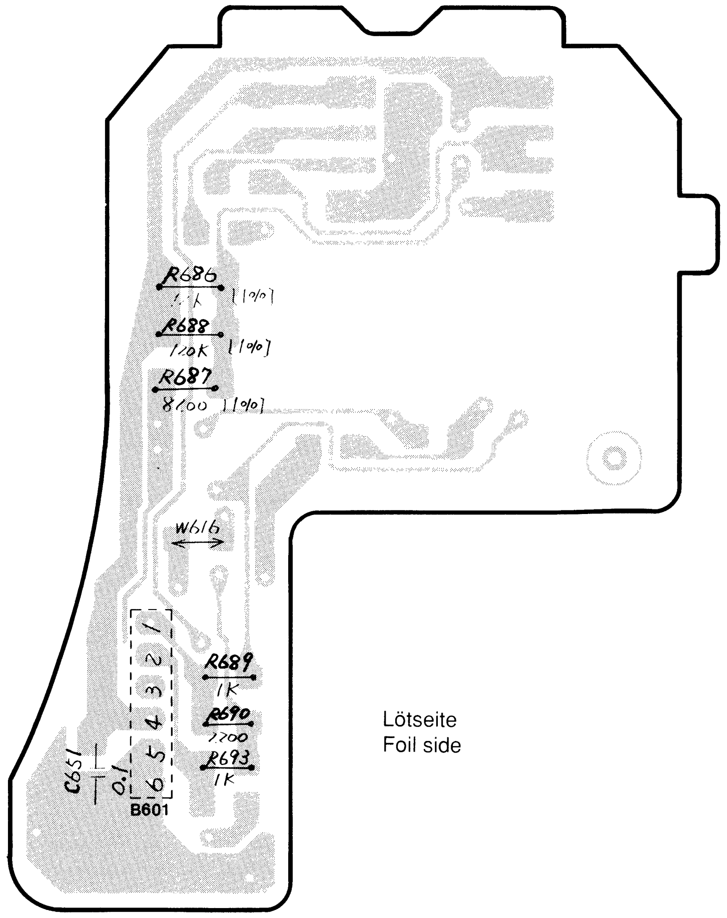
Für Werte ohne Bezeichnung F (µF) oder Ω einsetzen.
Read F (µF) or Ω respectively unless otherwise noted.

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen (Betriebsart Stop).
DC voltages tol. ± 15 % measured with digital voltmeter against GND (Stop mode).

AWT-Platine
AWT C.B.A.

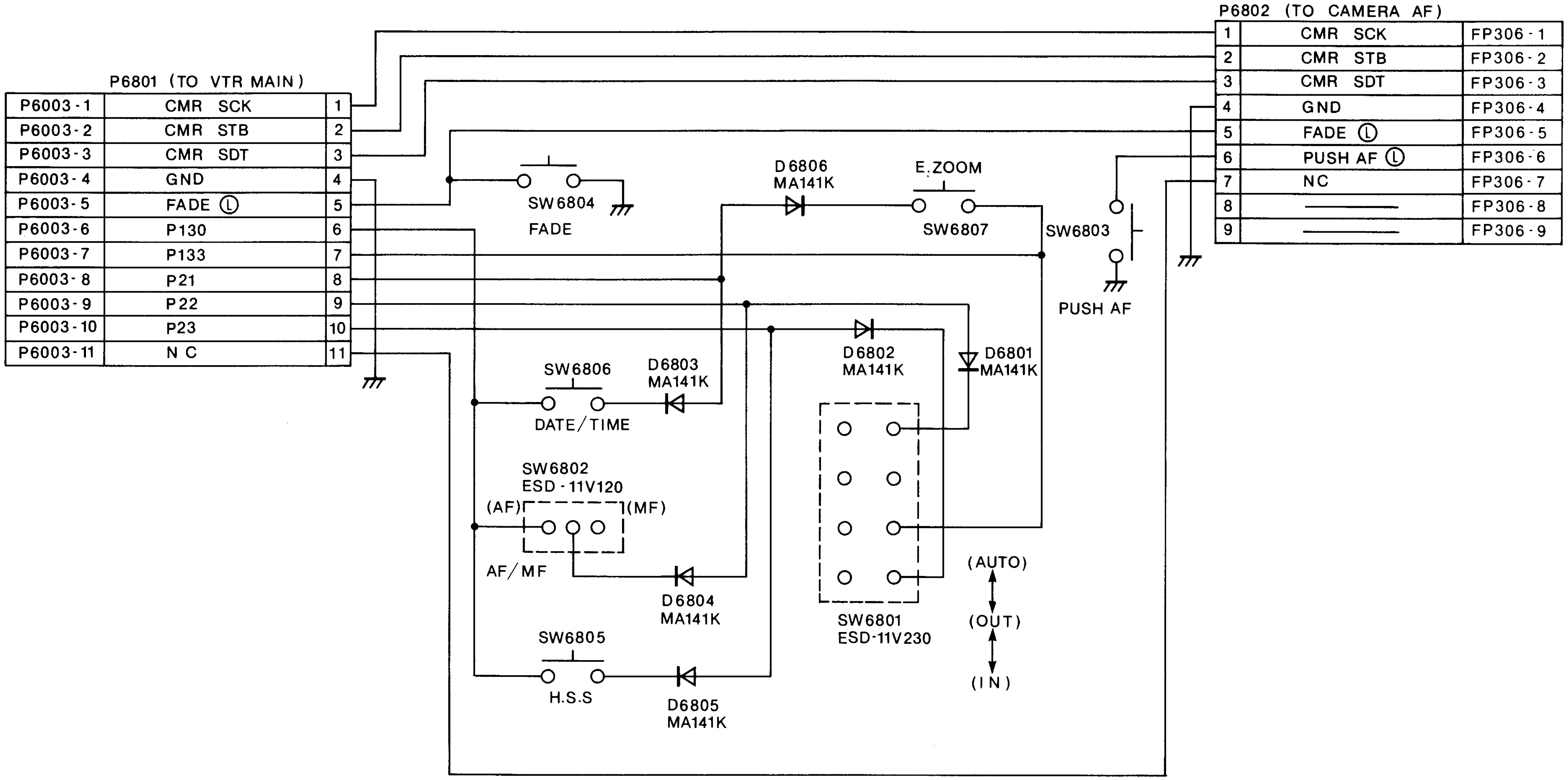

IC651
10
11
12
13
14
15
16
32
31
30
29
28
27
26
17 18 19 20 21 22 23 24 25
6 5 4 3 2 1
B601

Bestückungsseite
Component side


R686
12K (1%)
R688
120K (1%)
R687
8200 (1%)
W616
C651
0.1
6 5 4 3 2 1
B601
R689
1K
R690
2200
R693
1K

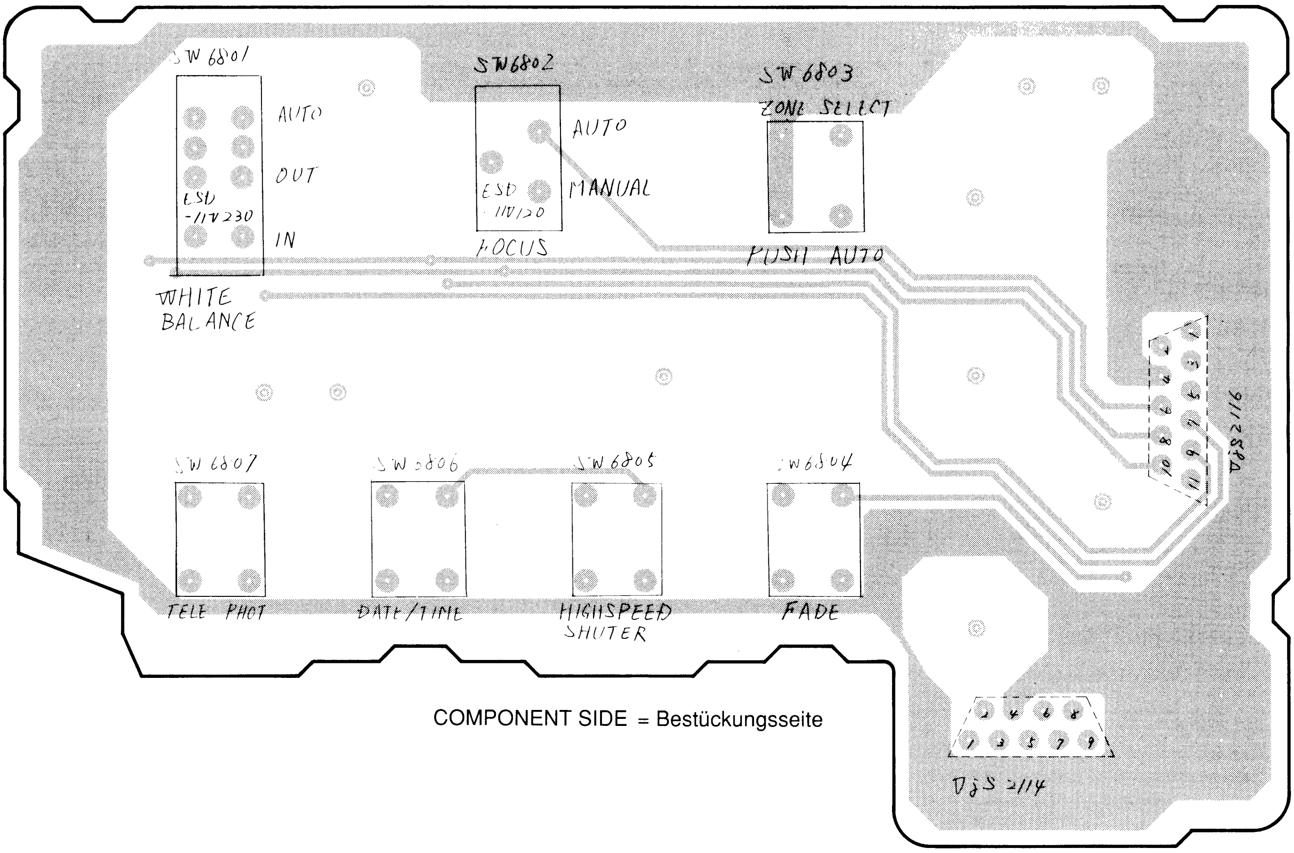
Lötseite
Foil side

Schaltbild des Kamera-Bedienteiles
Camera Operation Schematic Diagram

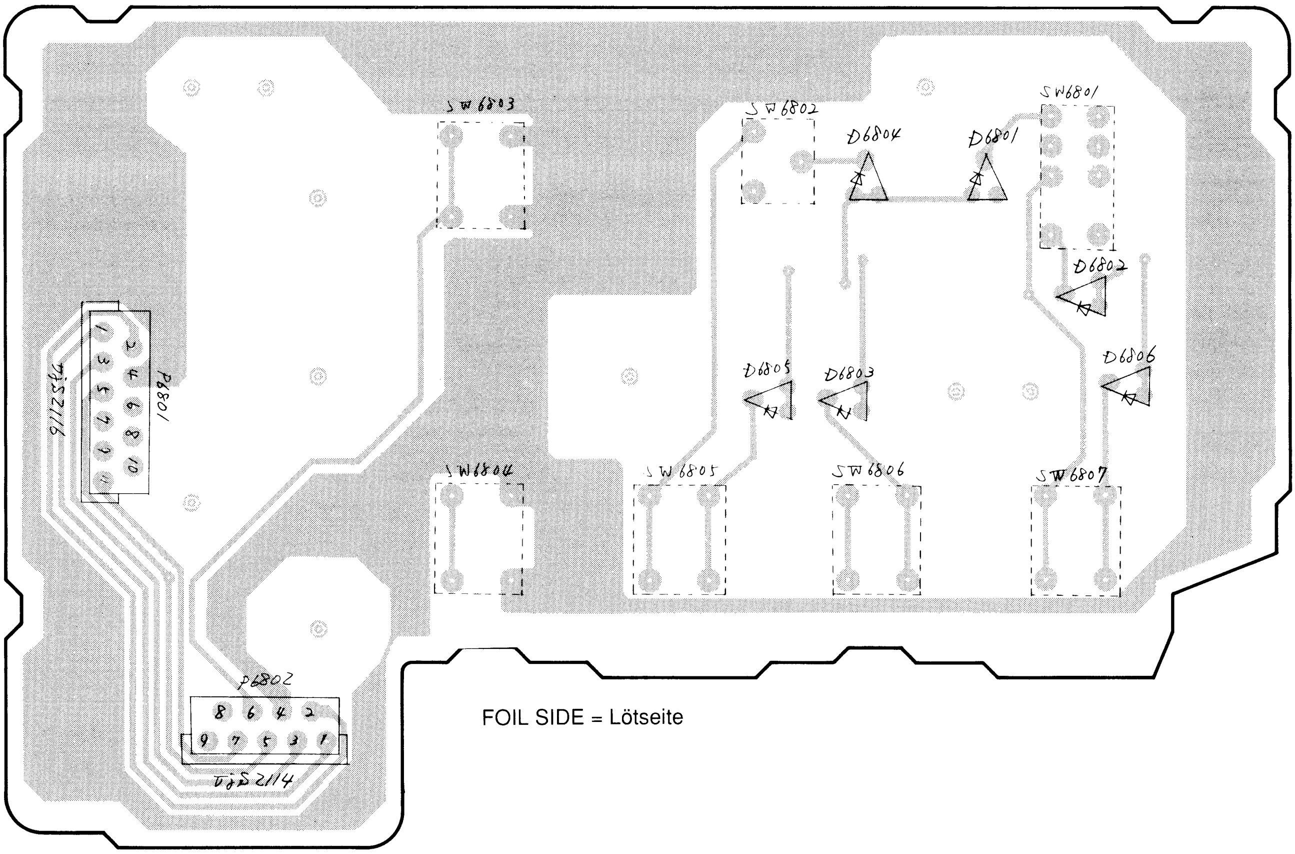

P6801 (TO VTR MAIN)
P6003-1 CMR SCK 1
P6003-2 CMR STB 2
P6003-3 CMR SDT 3
P6003-4 GND 4
P6003-5 FADE Ⓛ 5
P6003-6 P130 6
P6003-7 P133 7
P6003-8 P21 8
P6003-9 P22 9
P6003-10 P23 10
P6003-11 N C 11
P6802 (TO CAMERA AF)
1 CMR SCK FP306-1
2 CMR STB FP306-2
3 CMR SDT FP306-3
4 GND FP306-4
5 FADE Ⓛ FP306-5
6 PUSH AF Ⓛ FP306-6
7 NC FP306-7
8 FP306-8
9 FP306-9
SW6804
FADE
D6806
MA141K
E.ZOOM
SW6807
SW6803
PUSH AF
SW6806
DATE/TIME
D6803
MA141K
D6802
MA141K
D6801
MA141K
SW6802
ESD-11V120
(AF)
(MF)
AF/MF
D6804
MA141K
SW6801
ESD-11V230
(AUTO)
(OUT)
(IN)
SW6805
H.S.S
D6805
MA141K

Für Werte ohne Bezeichnung F (µF) oder Ω einsetzen.
Read F (µF) or Ω respectively unless otherwise noted.

Kamera-Bedienteilplatine
Camera Operation C.B.A.


SW 6801
AUTO
OUT
ESD -11V230
IN
WHITE BALANCE
SW6802
AUTO
ESD 11V120
MANUAL
FOCUS
SW 6803
ZONE SELECT
PUSH AUTO
9112S4D
1 2 3 4 5 6 7 8 9 10 11
SW 6807
SW 6806
SW 6805
SW 6804
TELE PHOT
DATE/TIME
HIGHSPEED SHUTER
FADE
2 4 6 8
1 3 5 7 9
DJS 2114

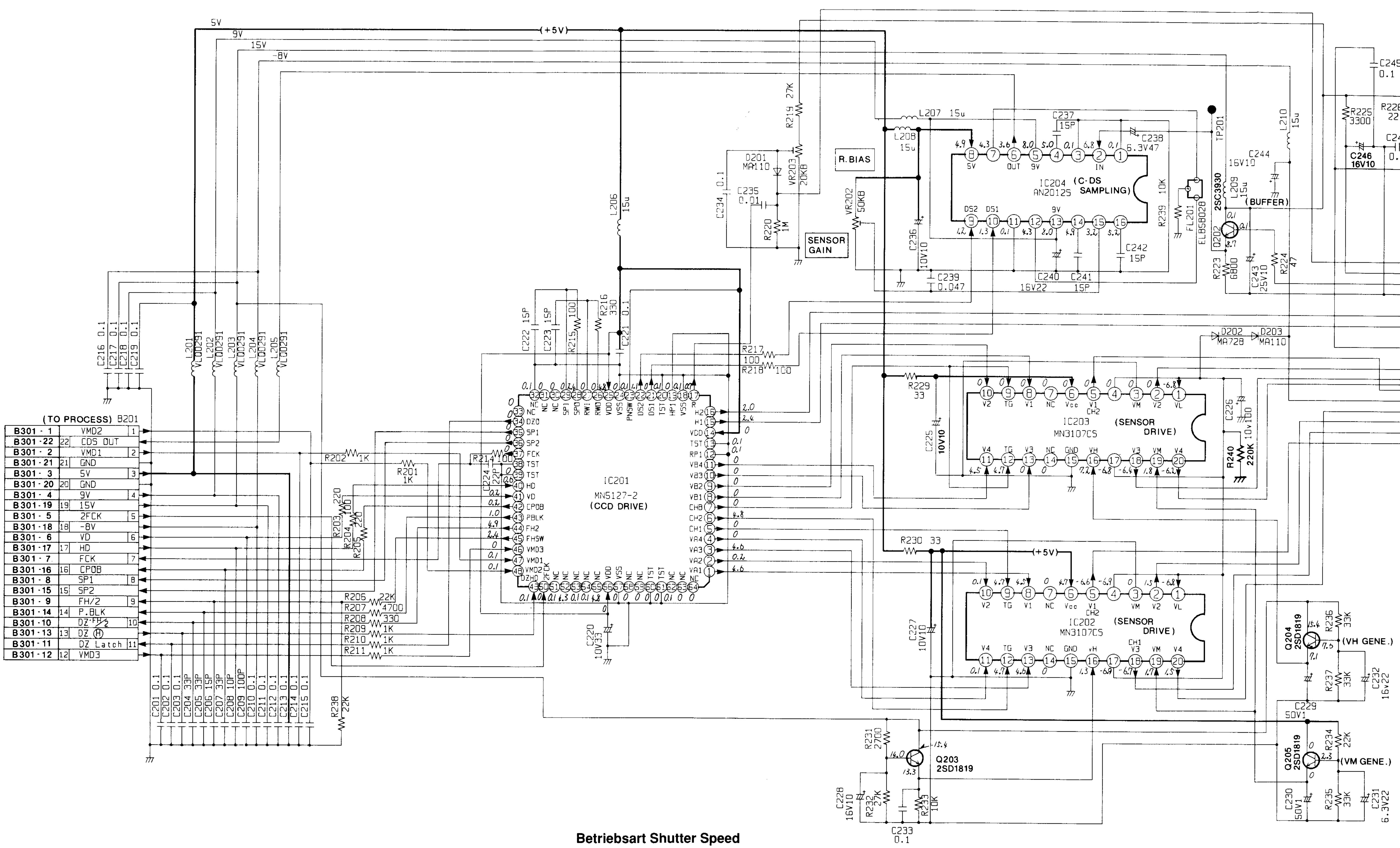
COMPONENT SIDE = Bestückungsseite


SW 6803
SW 6802
D6804
D6801
SW6801
D6802
D6805
D6803
D6806
9112S4G
P6801
1 2 3 4 5 6 7 8 9 10 11
SW6804
SW 6805
SW 6806
SW 6807
P6802
8 6 4 2
9 7 5 3 1
DJS 2114

FOIL SIDE = Lötseite

Schaltbild des CCD-Sensorteiles
CCD Sensor Schematic Diagram

Schaltbild des
CCD Sensor S


5V
9V
15V
-8V
(+5V)
(TO PROCESS) B201
B301 - 1 VMD2 1
B301 - 22 22 CDS OUT
B301 - 2 VMD1 2
B301 - 21 21 GND
B301 - 3 5V 3
B301 - 20 20 GND
B301 - 4 9V 4
B301 - 19 19 15V
B301 - 5 2FCK 5
B301 - 18 18 -8V
B301 - 6 VD 6
B301 - 17 17 HD
B301 - 7 FCK 7
B301 - 16 16 CPOB
B301 - 8 SP1 8
B301 - 15 15 SP2
B301 - 9 FH/2 9
B301 - 14 14 P.BLK
B301 - 10 DZ·FH/2 10
B301 - 13 13 DZ Ⓗ
B301 - 11 DZ Latch 11
B301 - 12 12 VMD3
IC201 MN5127-2 (CCD DRIVE)
IC204 (C-DS SAMPLING) AN20125
IC203 MN3107CS (SENSOR DRIVE)
IC202 MN3107CS (SENSOR DRIVE)
Q201 2SC3930 (BUFFER)
Q203 2SD1819
Q204 2SD1819 (VH GENE.)
Q205 2SD1819 (VM GENE.)
R.BIAS
SENSOR GAIN
FL201 ELB5B028
TP201
L201 VL00291
L202 VL00291
L203 VL00291
L204 VL00291
L205 VL00291
L206 15u
L207 15u
L208 15u
L209 15u
L210 15u
VR202 50KB
VR203 20KB
D201 MA110
D202 MA728
D203 MA110
R219 27K
R220 1M
R229 33
R230 33
R231 2700
R232 27K
R233 10K
R234 22K
R235 33K
R236 33K
R237 33K
R238 22K
R239 10K
R240 220K
R223 6800
R224 47
R225 3300
R202 1K
R201 1K
R203 220
R204 100
R205 220
R206 22K
R207 4700
R208 330
R209 1K
R210 1K
R211 1K
R214 100
R215 100
R216 330
R217 100
R218 100
C201 0.1
C202 0.1
C203 0.1
C204 33P
C205 33P
C206 15P
C207 33P
C208 10P
C209 100P
C210 0.1
C211 0.1
C212 0.1
C213 0.1
C214 0.1
C215 0.1
C216 0.1
C217 0.1
C218 0.1
C219 0.1
C220 10V33
C221 0.1
C222 15P
C223 15P
C224 22P
C225 10V10
C226 10V100
C227 10V10
C228 16V10
C229 50V1
C230 50V1
C231 6.3V22
C232 16V22
C233 0.1
C234 0.1
C235 0.01
C236 10V10
C237 15P
C238 6.3V47
C239 0.047
C240 16V22
C241 15P
C242 15P
C243 25V10
C244 16V10
C246 16V10

Betriebsart Shutter Speed
Shutter Speed Mode

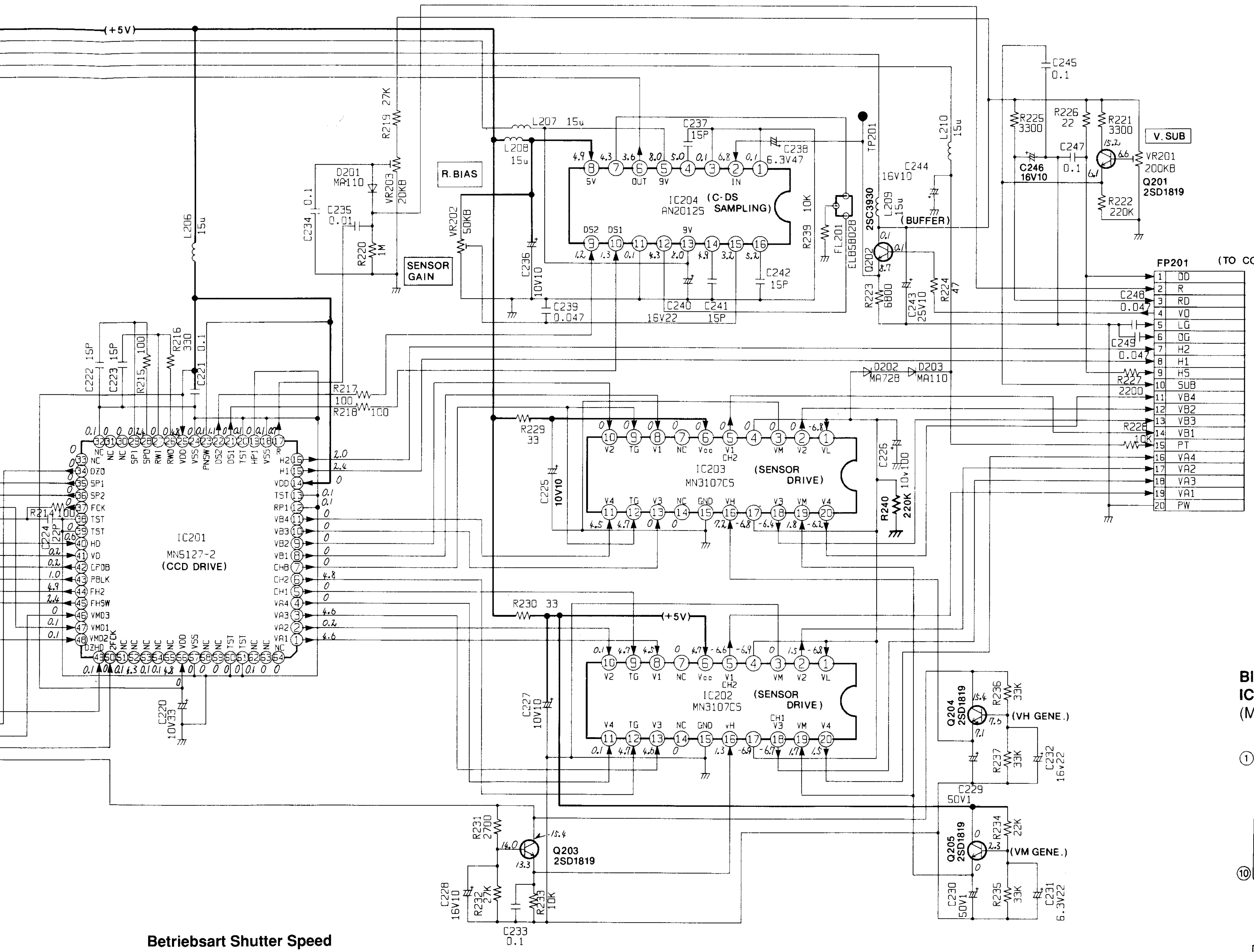
ELEC. SHUTTER MODE

VMD3	L	H	L	L	L	H
VMD1	L	L	L	H	H	L
VMD2	L	L	H	L	H	H
ELEC. SHUTTER	NORMAL 1/60	1/100	1/250	1/500	1/1000	1/2000

Für Werte ohne Bezeichnung F (µF) oder Ω einsetzen.
Read F (µF) or Ω respectively unless otherwise noted.

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen (Betriebsart Stop).
DC voltages tol. ± 15 % measured with digital voltmeter against GND (Stop mode).

Schaltbild des CCD-Sensorteiles
CCD Sensor Schematic Diagram

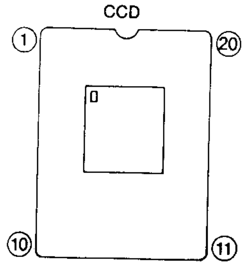

(+5V)
R219 27K
L207 15u
L208 15u
C237 15P
C238 6.3V47
D201 MA110
VR203 20KB
C234 0.1
C235 0.01
R220 1M
R.BIAS
VR202 50KB
SENSOR GAIN
L206 15u
IC204 (C-DS SAMPLING)
AN2012S
C236 10V10
C239 0.047
C240 16V22
C241 15P
C242 15P
R239 10K
FL201 ELB5802B
TP201
Q202 2SC3930
L209 15u
(BUFFER)
C244 16V10
R223 6800
C243 25V10
R224 47
L210 15u
C245 0.1
R225 3300
R226 22
R221 3300
C246 16V10
C247 0.1
V.SUB
VR201 200KB
Q201 2SD1819
R222 220K
FP201
(TO CCD MN3762F)
1 OD
2 R
3 RD
4 VO
5 LG
6 OG
7 H2
8 H1
9 HS
10 SUB
11 VB4
12 VB2
13 VB3
14 VB1
15 PT
16 VA4
17 VA2
18 VA3
19 VA1
20 PW
C248 0.047
C249 0.047
R227 2200
R228 10K
D202 MA728
D203 MA110
C222 15P
C223 15P
R215 100
R216 330
C221 0.1
R217 100
R218 100
R214 100
C224 22P
IC201
MN5127-2
(CCD DRIVE)
C220 10V33
R229 33
C225 10V10
IC203
MN3107CS
(SENSOR DRIVE)
C226 10V100
R240 220K
R230 33
C227 10V10
IC202
MN3107CS
(SENSOR DRIVE)
Q204 2SD1819
R236 33K
(VH GENE.)
R237 33K
C232 16V22
C229 50V1
Q205 2SD1819
R234 22K
(VM GENE.)
R235 33K
C230 50V1
C231 6.3V22
R231 2700
Q203 2SD1819
C228 16V10
R232 27K
R233 10K
C233 0.1

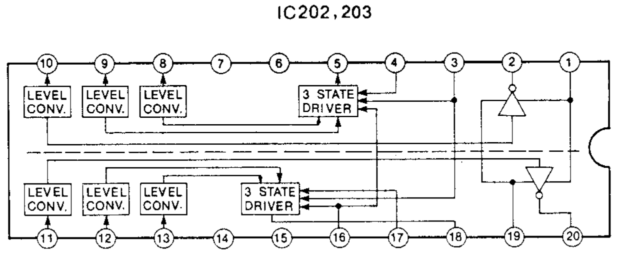
Betriebsart Shutter Speed
Shutter Speed Mode

ELEC. SHUTTER MODE

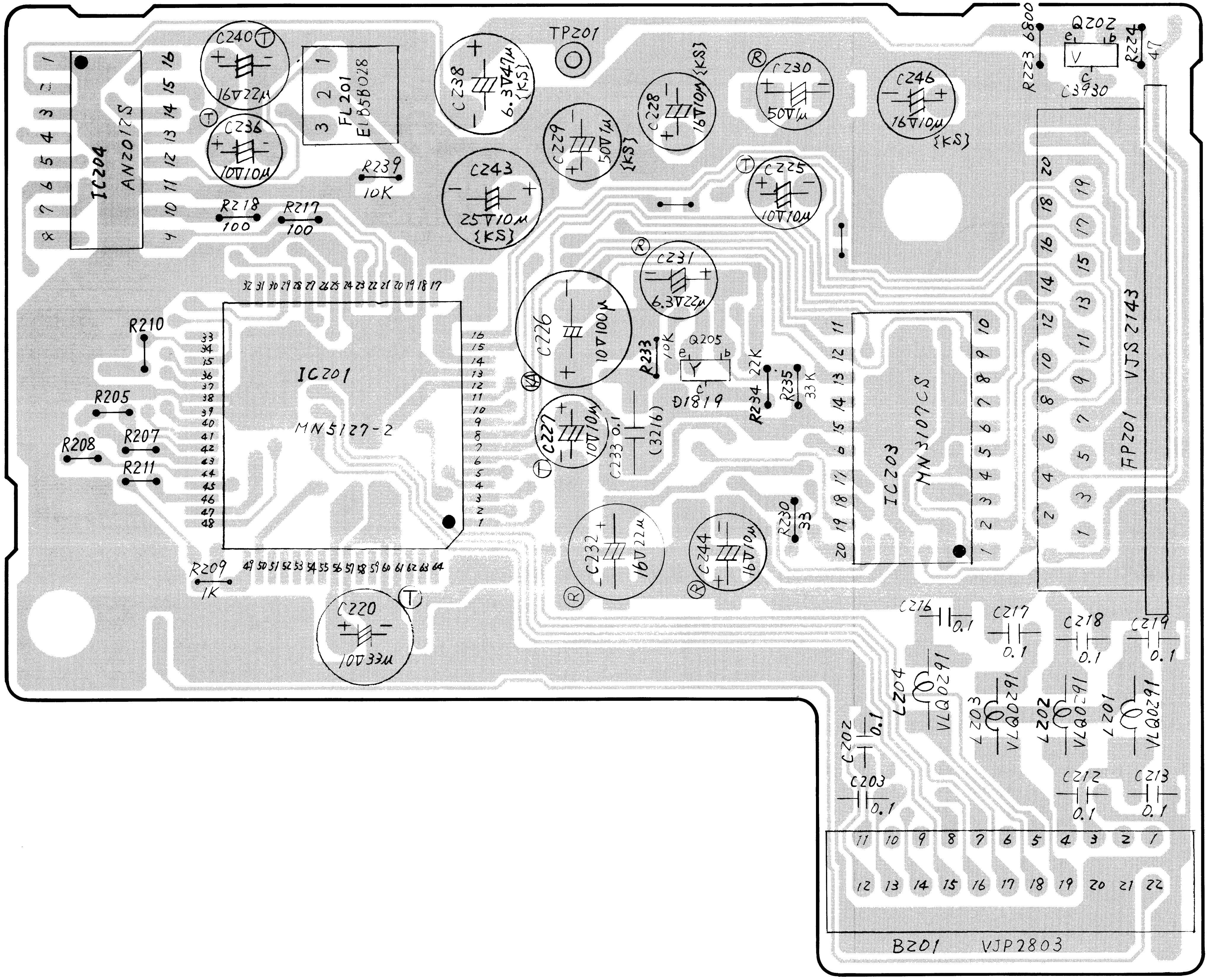
VMD3	L	H	L	L	L	H
VMD1	L	L	L	H	H	L
VMD2	L	L	H	L	H	H
ELEC. SHUTTER	NORMAL 1/60	1/100	1/250	1/500	1/1000	1/2000

Blockschaltbild der IC's 202, 203
IC's 202, 203 Block Diagram
(MN 3107 CS)



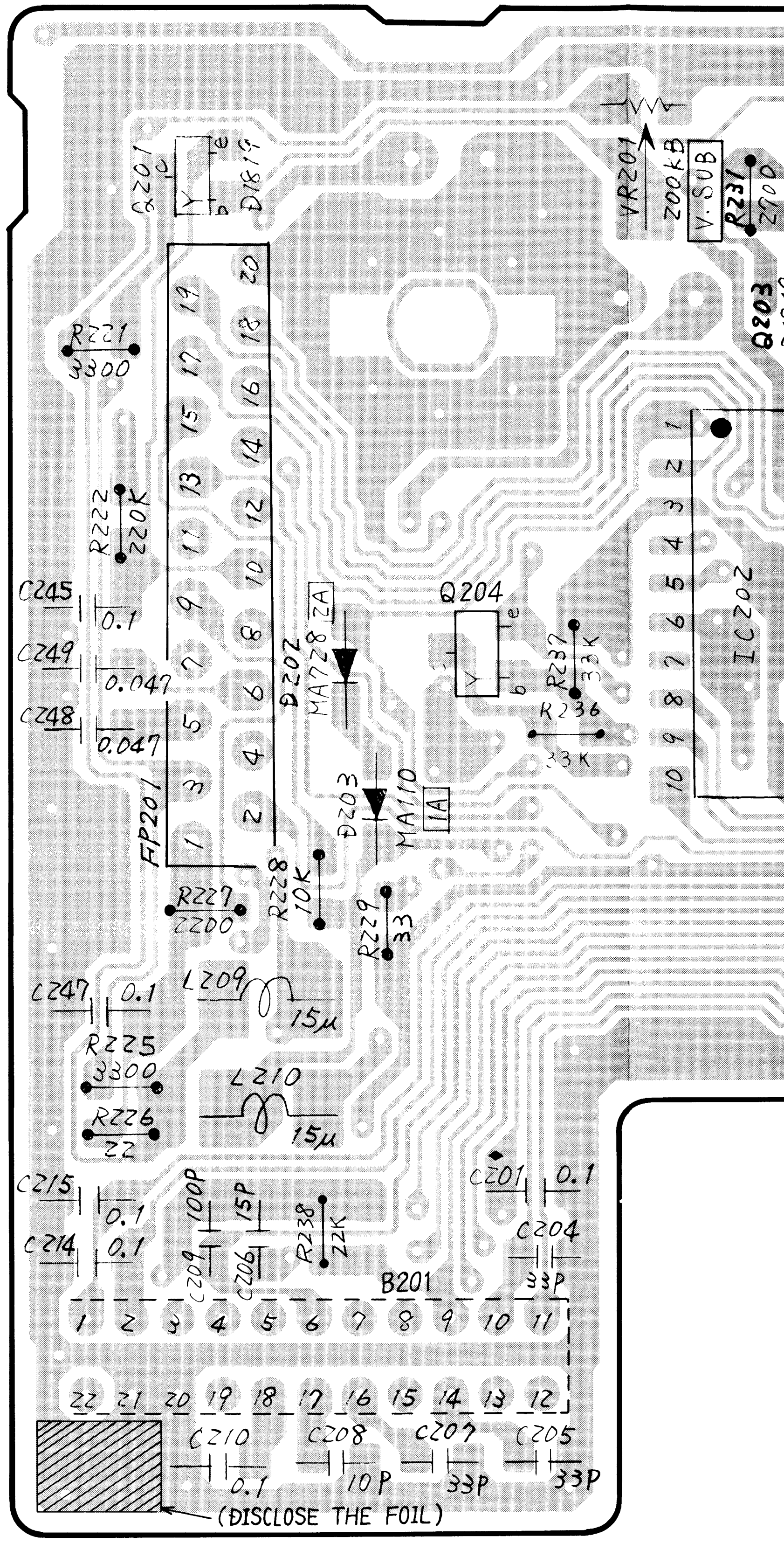

IC202,203
LEVEL CONV.
3 STATE DRIVER

CCD-Sensorplatine
CCD Sensor C.B.A.


IC204
AN2017S
C240
16V22µ
C236
10V10µ
FL201
EIB5B028
R239
10K
R218
100
R217
100
C238
6.3V47µ
{KS}
TP201
C229
50V1µ
{KS}
C228
16V10µ
{KS}
C243
25V10µ
{KS}
C230
50V1µ
C246
16V10µ
{KS}
C225
10V10µ
R223 6800
Q202
C3930
R224
47
C231
6.3V22µ
C226
10V100µ
R233
10K
Q205
D1819
R234 22K
R235
33K
C227
10V10µ
C233 0.1
(3216)
IC201
MN5127-2
R210
R205
R207
R208
R211
R209
1K
IC203
MN3107CS
FP201
VJS2143
R230
33
C232
16V22µ
C244
16V10µ
C220
10V33µ
C216
0.1
C217
0.1
C218
0.1
C219
0.1
L204
VLQ0291
L203
VLQ0291
L202
VLQ0291
L201
VLQ0291
C202
0.1
C203
0.1
C212
0.1
C213
0.1
B201
VJP2803

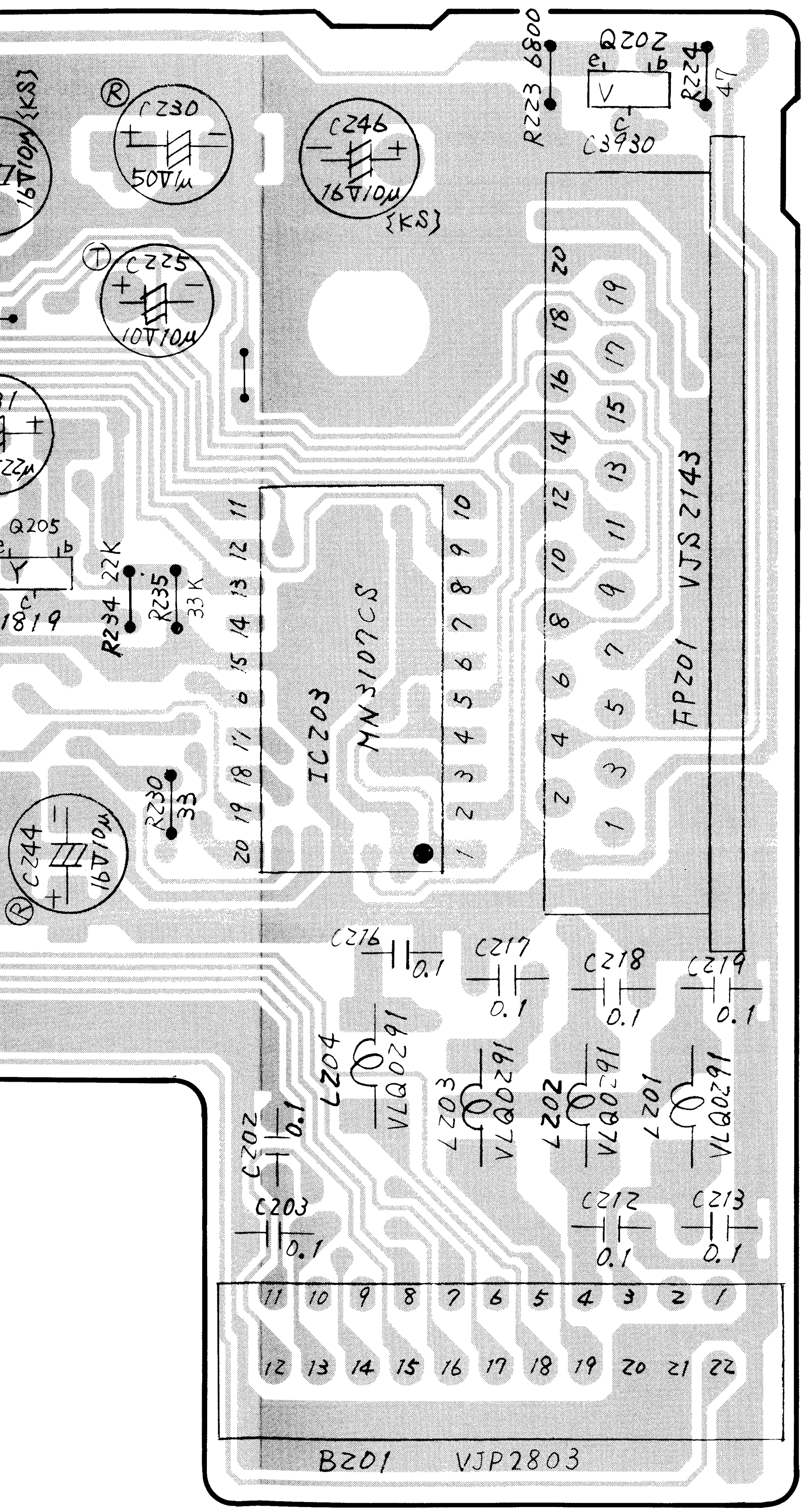
COMPONENT SIDE = Bestückungsseite

CCD-S
CCD S


Q201
D1819
VR201
200KB
V.SUB
R231
Q203
R221
3300
R222
220K
C245
0.1
C249
0.047
C248
0.047
FP201
D202
MA728
2A
D203
MA110
1A
Q204
R237
33K
R236
33K
IC202
R228
10K
R227
2200
R229
33
C247
0.1
L209
15µ
R225
3300
L210
15µ
R226
22
C215
0.1
C214
0.1
C209
100P
C206
15P
R238
22K
C201
0.1
C204
33P
B201
C210
0.1
C208
10P
C207
33P
C205
33P
(DISCLOSE THE FOIL)

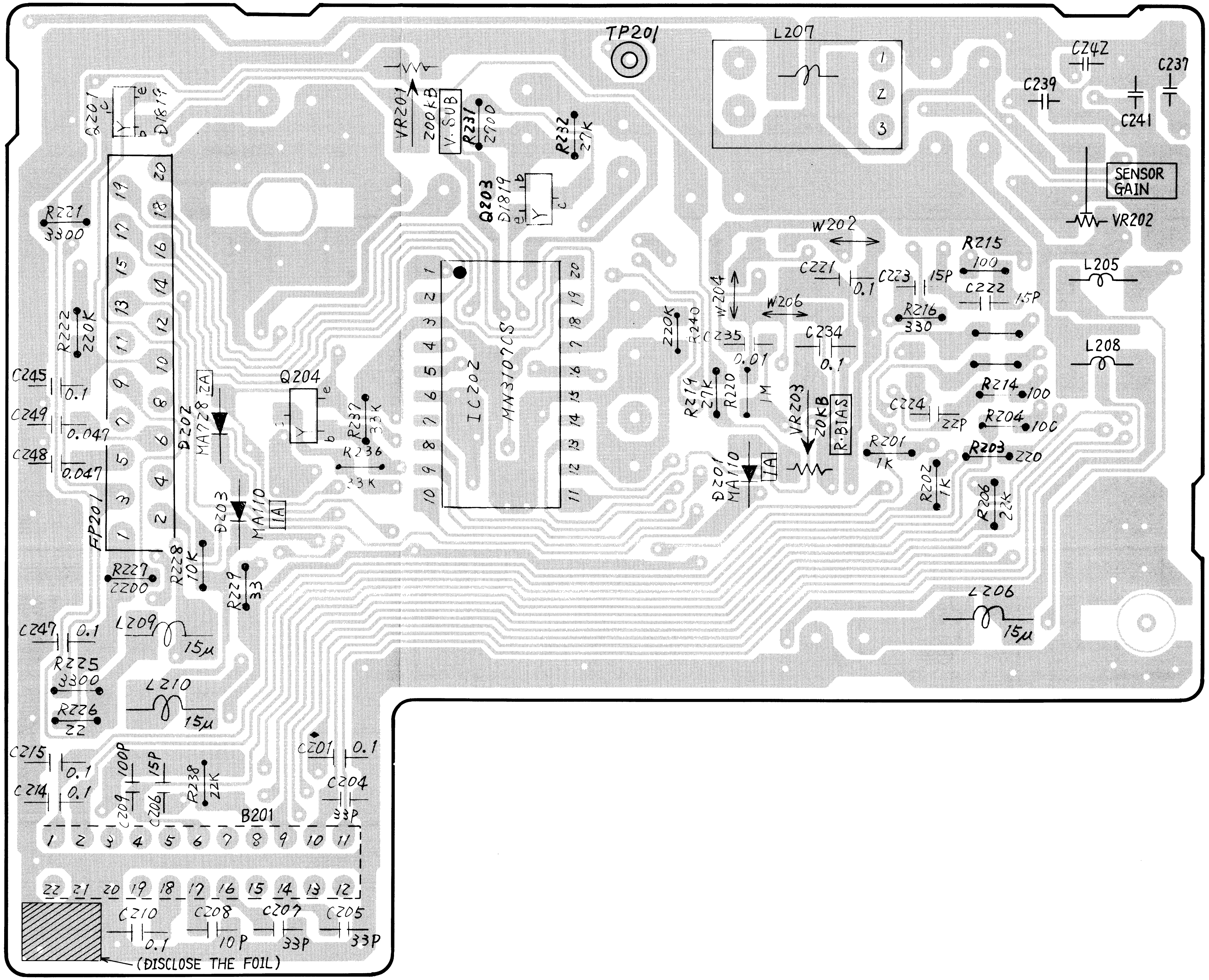
FOIL SIDE = Lötseite

CCD-Sensorplatine
CCD Sensor C.B.A.



Q202
R223 6800
R224 47
C3930
C230 50V1μ
C246 16V10μ {KS}
C225 10V10μ
C244 16V10μ
Q205
R234 22K
R235 33K
R230 33
IC203 MN3107CS
FP201 VJS2143
C216 0.1
C217 0.1
C218 0.1
C219 0.1
L204 VLQ0291
L203 VLQ0291
L202 VLQ0291
L201 VLQ0291
C202 0.1
C203 0.1
C212 0.1
C213 0.1
B201 VJP2803

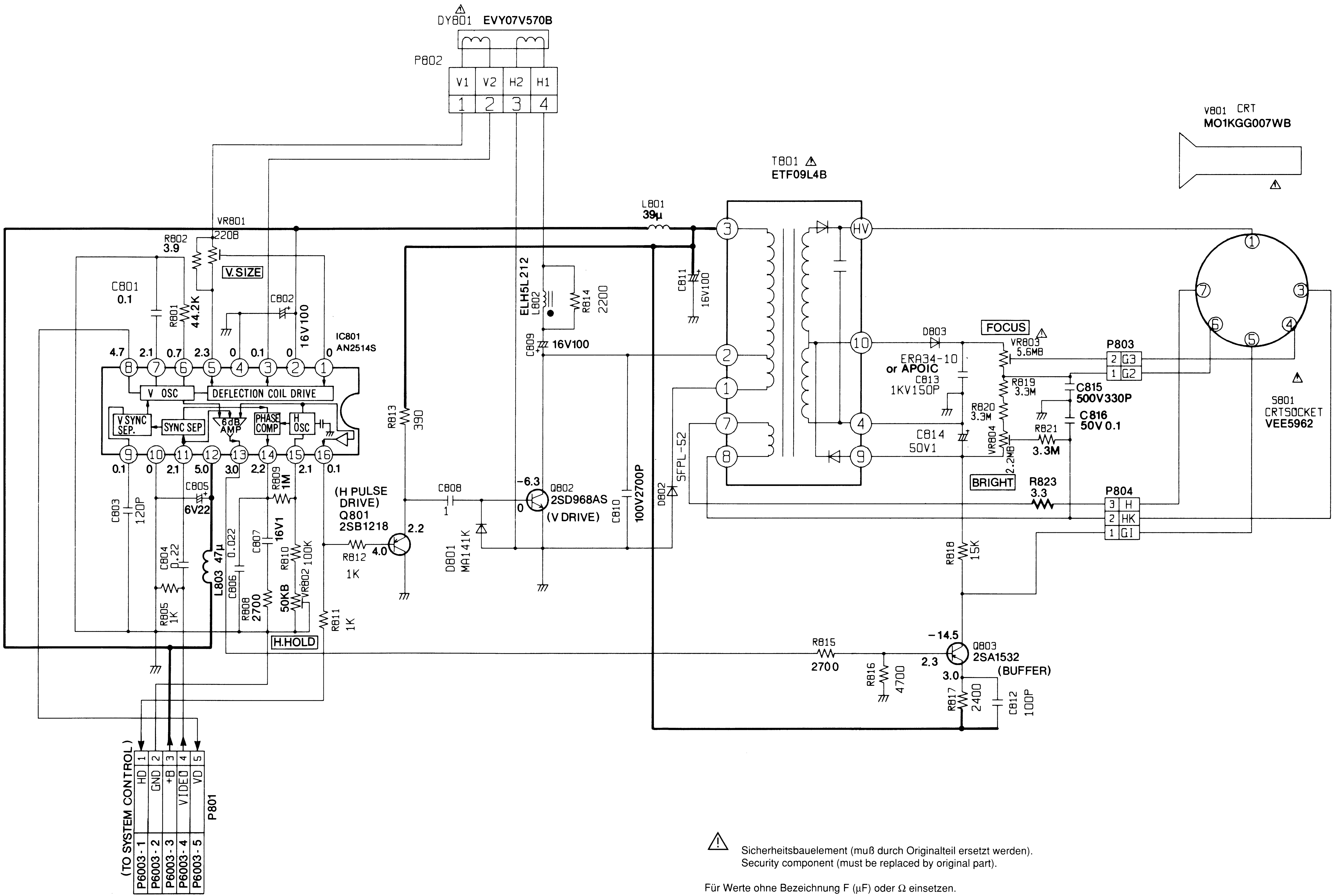
COMPONENT SIDE = Bestückungsseite



TP201
L207
C242
C237
C239
C241
VR201 200kB V.SUB
R231 2700
R232 27K
Q201 D1819
Q203 D1819
SENSOR GAIN
VR202
R221 3300
R222 220K
FP201
C245 0.1
C249 0.047
C248 0.047
D202 MA728 ZA
D203 MA110 1A
Q204
R237 33K
R236 33K
IC202 MN3107CS
R240 220K
W204
W206
W202
C221 0.1
C223 15P
C222 15P
R215 100
R216 330
L205
L208
C235 0.01
C234 0.1
R214 27K
R220 1M
VR203 20KB R.BIAS
D201 MA110 1A
C224 22P
R214 100
R204 100
R201 1K
R203 220
R202 1K
R206 22K
R227 2200
R228 10K
R229 33
C247 0.1
L209 15μ
R225 3300
L210 15μ
R226 22
L206 15μ
C215 0.1
C214 0.1
C209 100P
C206 15P
R238 22K
C201 0.1
C204 33P
B201
C210 0.1
C208 10P
C207 33P
C205 33P
(DISCLOSE THE FOIL)

FOIL SIDE = Lötseite

Schaltbild des Suchers
E.V.F. Schematic Diagram

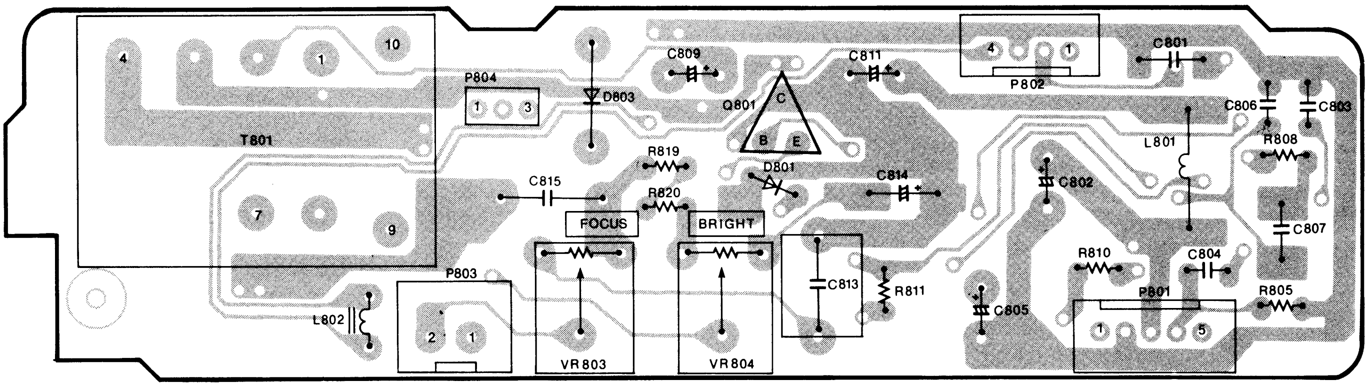

DY801 EVY07V570B
P802
V1 V2 H2 H1
1 2 3 4
V801 CRT
MO1KGG007WB
T801
ETF09L4B
L801
39µ
VR801
220B
R802
3.9
V.SIZE
C801
0.1
R801
44.2K
C802
16V100
IC801
AN2514S
4.7 2.1 0.7 2.3 0 0.1 0 0
V OSC
DEFLECTION COIL DRIVE
V SYNC SEP.
SYNC SEP
6dB AMP
PHASE COMP
H OSC
0.1 0 2.1 5.0 3.0 2.2 2.1 0.1
C803
120P
C805
6V22
C804
0.22
R805
1K
L803 47µ
C806
0.022
C807
16V1
R809
1M
R808
2700
R810
100K
VR802
50KB
R811
1K
H.HOLD
R813
390
(H PULSE DRIVE)
Q801
2SB1218
2.2
4.0
R812
1K
C808
1
D801
MA141K
ELH5L212
L802
R814
2200
C809
16V100
-6.3
0
Q802
2SD968AS
(V DRIVE)
C810
100V2700P
D802
SFPL-52
C811
16V100
HV
D803
ERA34-10
or APOIC
C813
1KV150P
FOCUS
VR803
5.6MB
R819
3.3M
R820
3.3M
C814
50V1
VR804
2.2MB
R821
3.3M
C815
500V330P
C816
50V 0.1
BRIGHT
R823
3.3
P803
2 G3
1 G2
P804
3 H
2 HK
1 GI
S801
CRTSOCKET
VEE5962
R818
15K
-14.5
Q803
2SA1532
(BUFFER)
2.3
3.0
R815
2700
R816
4700
R817
2400
C812
100P
(TO SYSTEM CONTROL)
P801
1 HD P6003 - 1
2 GND P6003 - 2
3 +B P6003 - 3
4 VIDEO P6003 - 4
5 VD P6003 - 5

⚠ Sicherheitsbauelement (muß durch Originalteil ersetzt werden).
Security component (must be replaced by original part).

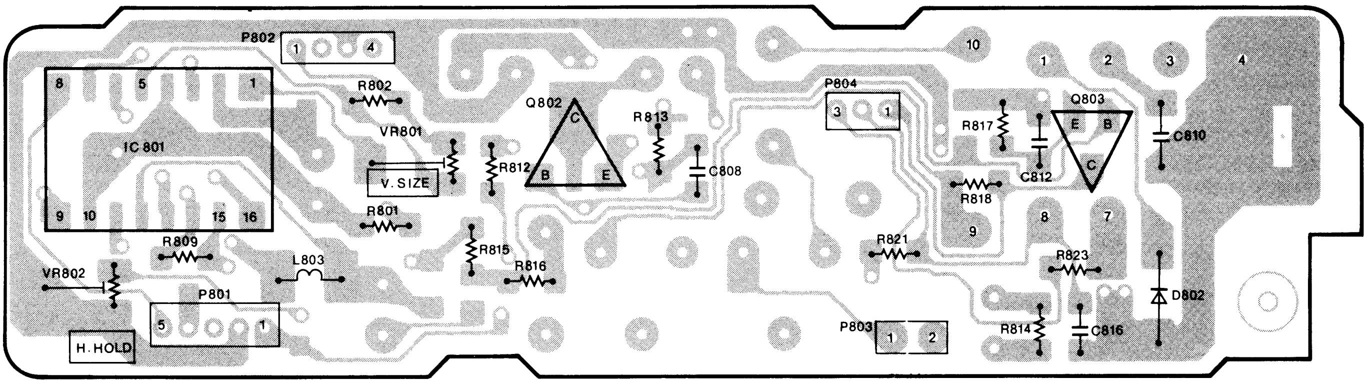
Für Werte ohne Bezeichnung F (µF) oder Ω einsetzen.
Read F (µF) or Ω respectively unless otherwise noted.

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen (Betriebsart Stop).
DC voltages tol. ± 15 % measured with digital voltmeter against GND (Stop mode).

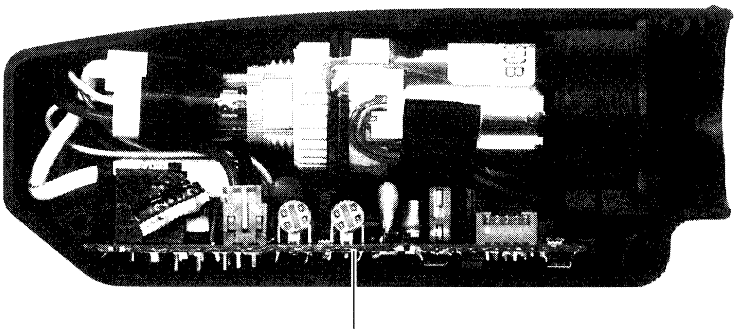
Sucherplatine
E.V.F. C.B.A.


T801
4
1
10
7
9
P804
1
3
D803
C809
C811
Q801
C
B
E
P802
4
1
C801
C806
C803
L801
R808
R819
C815
R820
D801
C814
C802
FOCUS
BRIGHT
C807
C813
R811
R810
C804
C805
P801
1
5
R805
P803
L802
2
1
VR803
VR804

COMPONENT SIDE = Bestückungsseite


P802
1
4
8
5
1
IC 801
9
10
15
16
R802
VR801
V. SIZE
R812
Q802
C
B
E
R813
C808
R801
P804
3
1
10
1
2
3
4
R817
Q803
E
B
C
C812
C810
R818
9
8
7
R809
VR802
L803
R815
R816
R821
R823
D802
P801
5
1
H. HOLD
P803
1
2
R814
C816

FOIL SIDE = Lötseite



Sucherplatine
E V F C.B.A.

Spannungstabelle des Netzteiles
Power Voltage Chart

REF. NO.	IC1001																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
STOP	0.6	0.7	1.1	2.0	0.8	1.4	1.5	0	2.8	2.8	2.8	1.3	0	0	3.5	7.8		

REF. NO.	IC1002									IC1003								
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	
STOP	1.0	1.5	1.4	0	0	0	0.3	7.9		1.0	1.5	1.4	0	0	0	0.3	7.9	

REF. NO.	Q1001			Q1002			Q1003			Q1004			Q1006			Q1007		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	7.9	5.2	7.4	7.9	5.2	7.4	7.9	7.9	7.3	0	7.8	0	5.1	5.1	4.4	0	7.8	0

REF. NO.	Q1008			Q1009			Q1010			QR1001			QR1002			QR1003		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	9.5	26.0	10.0	0	5.0	0	5.0	0	5.0	5.0	5.6	5.1	0	0	6.2	0	6.2	0

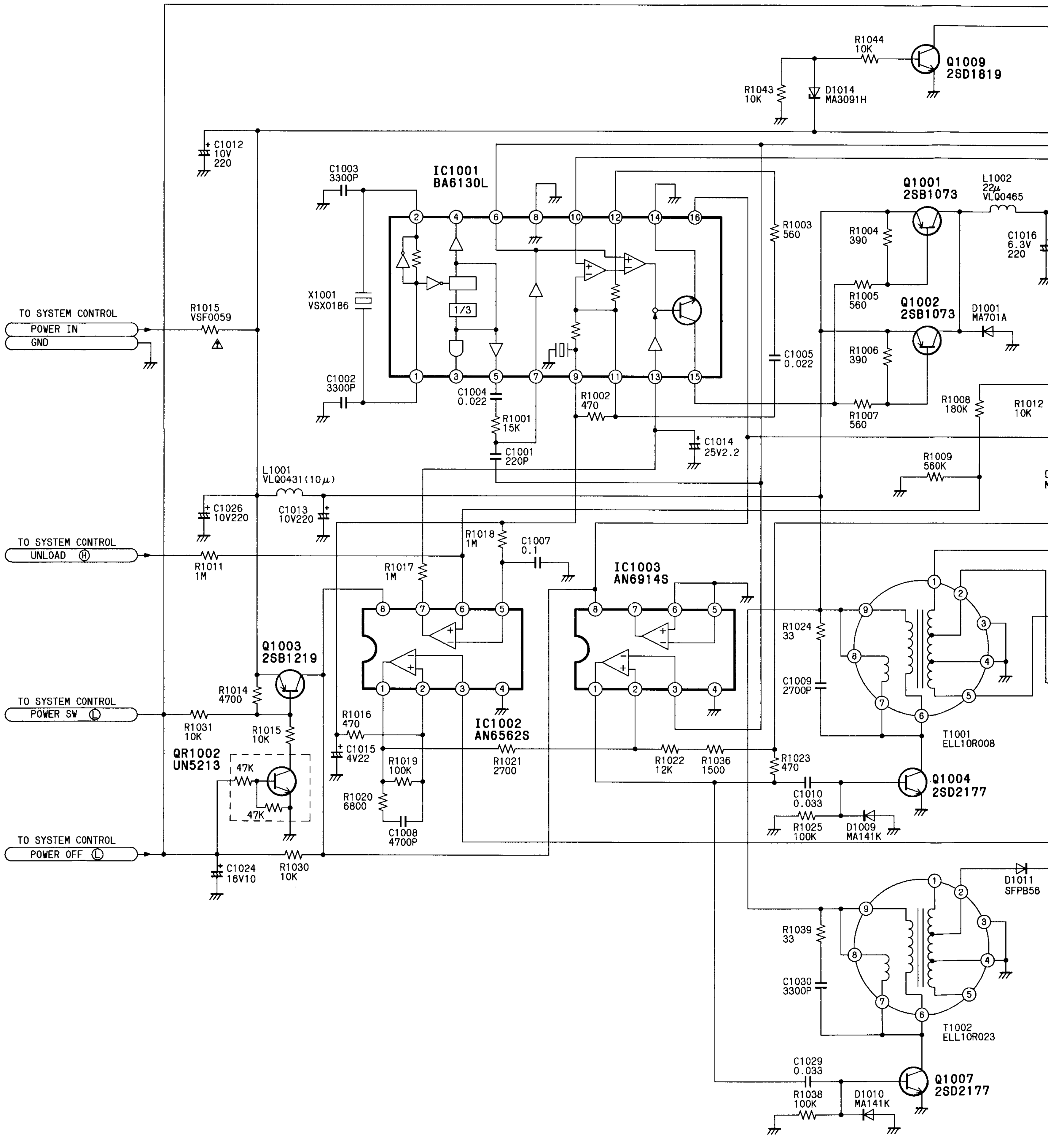
REF. NO.	Q1001			Q1002			Q1003			Q1004			Q1006			Q1007		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	7.9	5.2	7.4	7.9	5.2	7.4	7.9	7.9	7.3	0	7.8	0	5.1	5.1	4.4	0	7.8	0

REF. NO.	Q1008			Q1009			Q1010			QR1001			QR1002			QR1003		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	9.5	26.0	10.0	0	5.0	0	5.0	0	5.0	5.0	5.6	5.1	0	0	6.2	0	6.2	0

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.
DC voltages tol. ± 15 % measured with digital voltmeter against GND.

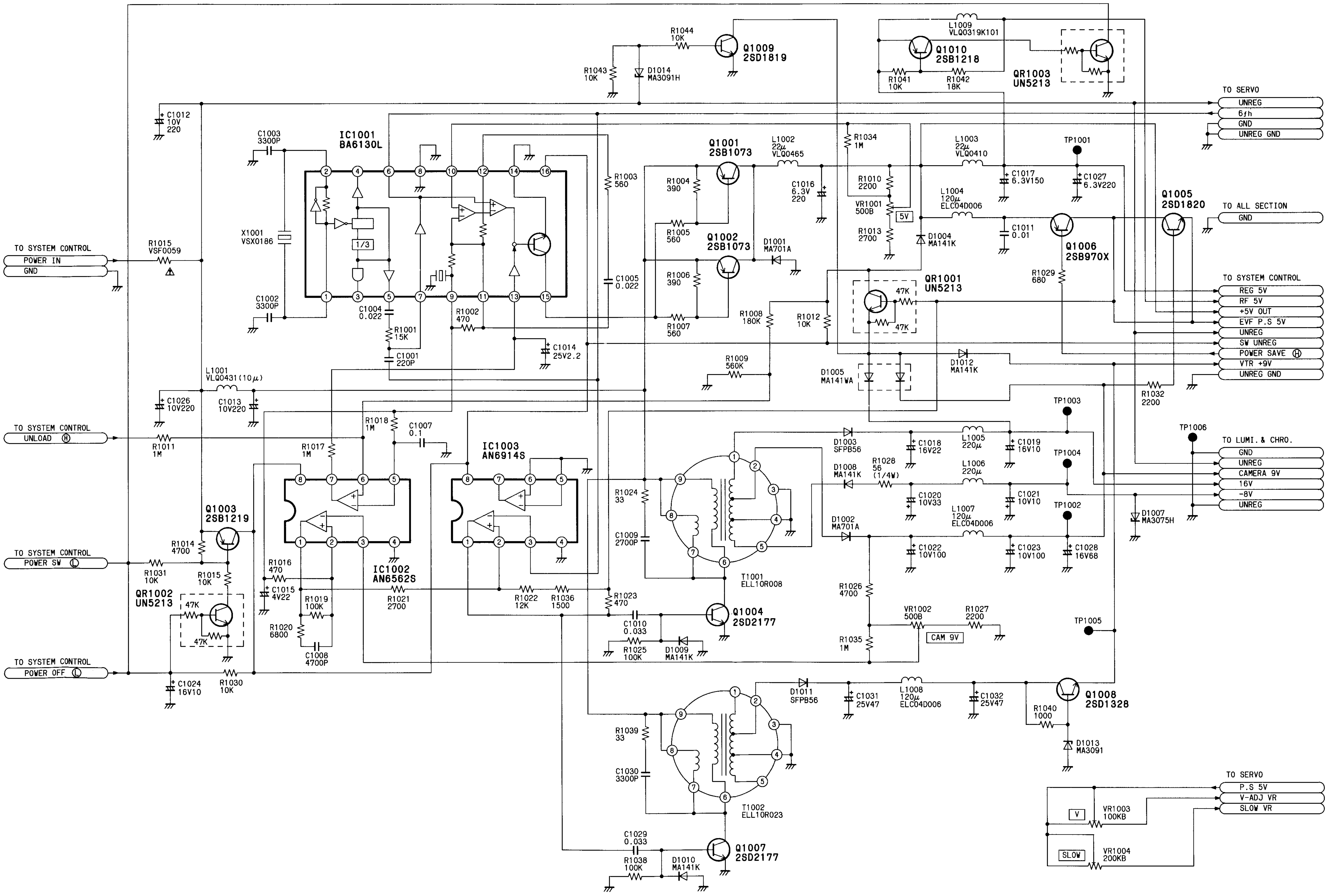
Darstellung der Hauptplatine auf den Ausschlagseiten 2-89 bis 2-91.
For the Main Board Diagram refer to the foil out page 2-89 to 2-91.

Schaltbild des Netzteiles
Power Supply Schematic Diagram



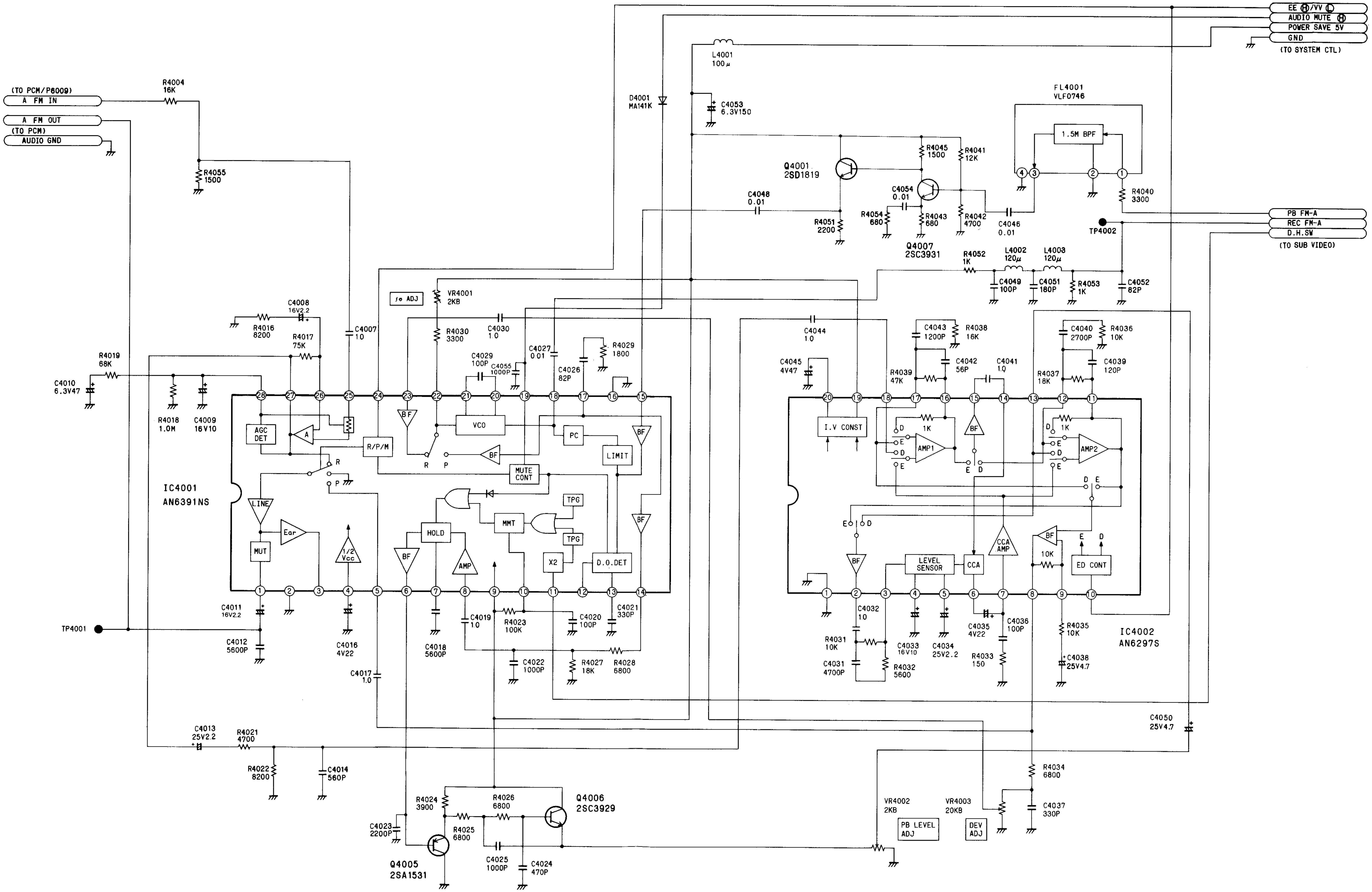
TO SYSTEM CONTROL
POWER IN
GND
TO SYSTEM CONTROL
UNLOAD Ⓗ
TO SYSTEM CONTROL
POWER SW Ⓛ
TO SYSTEM CONTROL
POWER OFF Ⓛ
R1044 10K
Q1009 2SD1819
R1043 10K
D1014 MA3091H
C1012 10V 220
C1003 3300P
IC1001 BA6130L
X1001 VSX0186
C1002 3300P
C1004 0.022
R1001 15K
C1001 220P
R1002 470
C1014 25V2.2
1/3
R1003 560
C1005 0.022
Q1001 2SB1073
L1002 22μ VLQ0465
R1004 390
C1016 6.3V 220
R1005 560
Q1002 2SB1073
D1001 MA701A
R1006 390
R1007 560
R1008 180K
R1012 10K
R1009 560K
R1015 VSF0059
L1001 VLQ0431(10μ)
C1026 10V220
C1013 10V220
R1011 1M
R1018 1M
C1007 0.1
R1017 1M
IC1003 AN6914S
Q1003 2SB1219
R1014 4700
R1031 10K
R1015 10K
QR1002 UN5213
47K
47K
R1016 470
C1015 4V22
R1019 100K
R1020 6800
C1008 4700P
IC1002 AN6562S
R1021 2700
R1022 12K
R1036 1500
R1024 33
C1009 2700P
T1001 ELL10R008
R1023 470
C1010 0.033
R1025 100K
D1009 MA141K
Q1004 2SD2177
C1024 16V10
R1030 10K
D1011 SFPB56
R1039 33
C1030 3300P
T1002 ELL10R023
C1029 0.033
R1038 100K
D1010 MA141K
Q1007 2SD2177

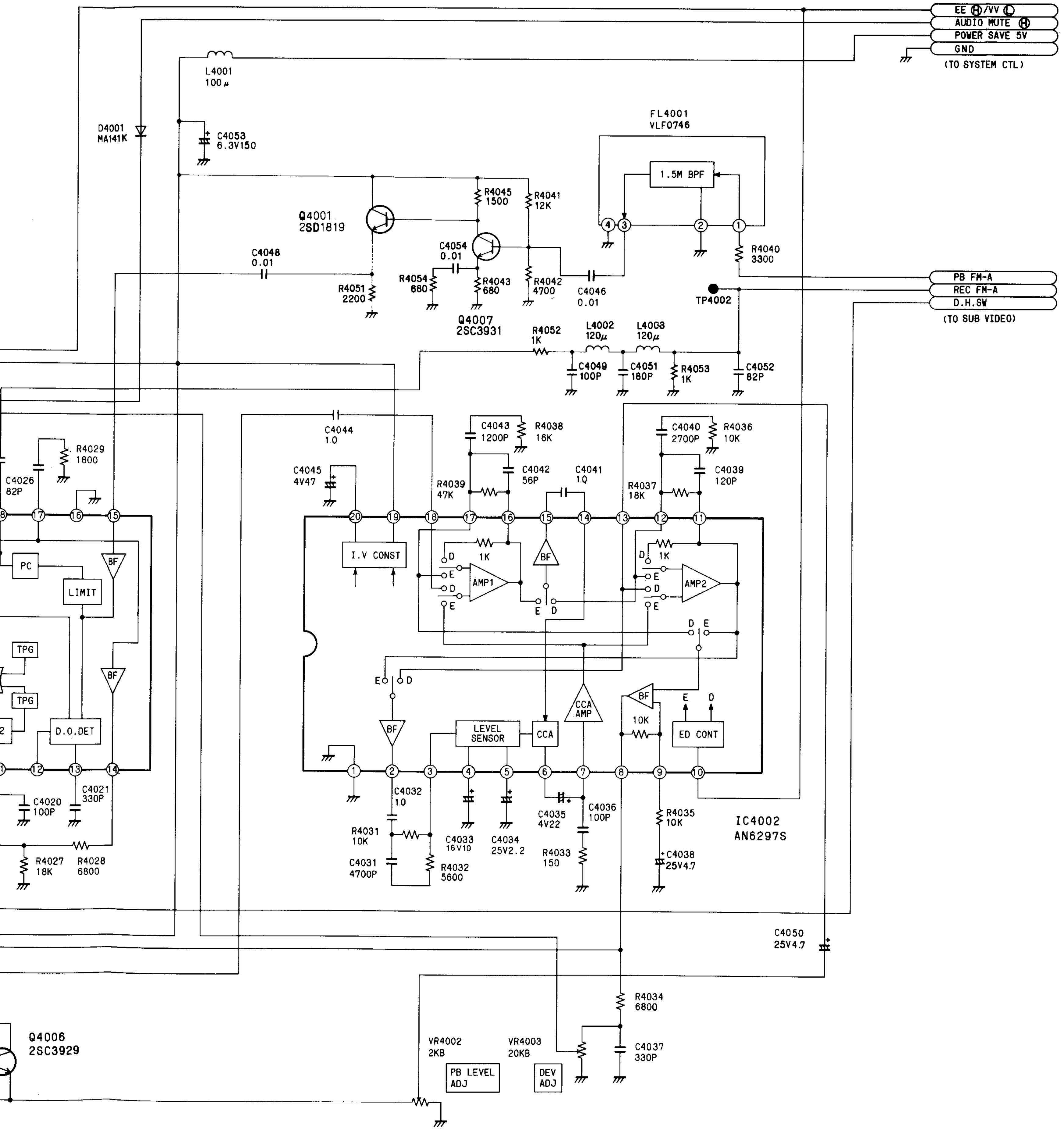
Schaltbild des Netzteiles
Power Supply Schematic Diagram



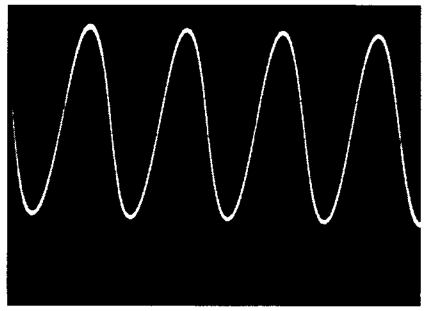
TO SYSTEM CONTROL
POWER IN
GND
R1015 VSF0059
C1012 10V 220
C1003 3300P
IC1001 BA6130L
X1001 VSX0186
C1002 3300P
C1004 0.022
R1001 15K
C1001 220P
R1002 470
C1014 25V2.2
1/3
R1003 560
C1005 0.022
R1043 10K
D1014 MA3091H
R1044 10K
Q1009 2SD1819
Q1001 2SB1073
L1002 22µ VLQ0465
C1016 6.3V 220
R1004 390
R1005 560
Q1002 2SB1073
D1001 MA701A
R1006 390
R1007 560
R1008 180K
R1012 10K
R1009 560K
R1034 1M
R1010 2200
VR1001 500B
5V
R1013 2700
D1004 MA141K
L1009 VLQ0319K101
Q1010 2SB1218
R1041 10K
R1042 18K
QR1003 UN5213
L1003 22µ VLQ0410
C1017 6.3V150
TP1001
C1027 6.3V220
L1004 120µ ELC04D006
C1011 0.01
Q1006 2SB970X
Q1005 2SD1820
R1029 680
QR1001 UN5213
47K
47K
D1005 MA141WA
D1012 MA141K
R1032 2200
TO SERVO
UNREG
6fh
GND
UNREG GND
TO ALL SECTION
GND
TO SYSTEM CONTROL
REG 5V
RF 5V
+5V OUT
EVF P.S 5V
UNREG
SW UNREG
POWER SAVE Ⓗ
VTR +9V
UNREG GND
L1001 VLQ0431(10µ)
C1026 10V220
C1013 10V220
TO SYSTEM CONTROL
UNLOAD Ⓗ
R1011 1M
R1018 1M
C1007 0.1
R1017 1M
IC1003 AN6914S
IC1002 AN6562S
Q1003 2SB1219
R1014 4700
TO SYSTEM CONTROL
POWER SW Ⓛ
R1031 10K
R1015 10K
QR1002 UN5213
47K
47K
R1016 470
C1015 4V22
R1019 100K
R1020 6800
C1008 4700P
R1021 2700
R1022 12K
R1036 1500
R1023 470
TO SYSTEM CONTROL
POWER OFF Ⓛ
C1024 16V10
R1030 10K
R1024 33
C1009 2700P
T1001 ELL10R008
Q1004 2SD2177
C1010 0.033
R1025 100K
D1009 MA141K
D1003 SFPB56
C1018 16V22
L1005 220µ
C1019 16V10
TP1003
TP1004
TP1006
D1008 MA141K
R1028 56 (1/4W)
L1006 220µ
C1020 10V33
C1021 10V10
L1007 120µ ELC04D006
TP1002
D1002 MA701A
C1022 10V100
C1023 10V100
C1028 16V68
D1007 MA3075H
TO LUMI. & CHRO.
GND
UNREG
CAMERA 9V
16V
-8V
UNREG
R1026 4700
VR1002 500B
R1027 2200
CAM 9V
R1035 1M
TP1005
D1011 SFPB56
C1031 25V47
L1008 120µ ELC04D006
C1032 25V47
Q1008 2SD1328
R1040 1000
D1013 MA3091
R1039 33
C1030 3300P
T1002 ELL10R023
C1029 0.033
R1038 100K
D1010 MA141K
Q1007 2SD2177
TO SERVO
P.S 5V
V-ADJ VR
SLOW VR
V
VR1003 100KB
SLOW
VR1004 200KB

Schaltbild des FM-Tonteiles
FM Audio Schematic Diagram


(TO PCM/P8009)
A FM IN
A FM OUT
(TO PCM)
AUDIO GND
R4004
16K
R4055
1500
EE Ⓗ/VV Ⓛ
AUDIO MUTE Ⓗ
POWER SAVE 5V
GND
(TO SYSTEM CTL)
L4001
100µ
D4001
MA141K
C4053
6.3V150
FL4001
VLF0746
1.5M BPF
R4045
1500
R4041
12K
Q4001
2SD1819
C4054
0.01
C4048
0.01
R4051
2200
R4054
680
R4043
680
R4042
4700
C4046
0.01
R4040
3300
TP4002
PB FM-A
REC FM-A
D.H.SW
(TO SUB VIDEO)
Q4007
2SC3931
R4052
1K
L4002
120µ
L4003
120µ
C4049
100P
C4051
180P
R4053
1K
C4052
82P
f0 ADJ
VR4001
2KB
C4008
16V2.2
R4016
8200
R4017
75K
C4007
1.0
R4030
3300
C4030
1.0
C4029
100P
C4055
1000P
C4027
0.01
C4026
82P
R4029
1800
R4019
68K
C4010
6.3V47
R4018
1.0M
C4009
16V10
AGC DET
A
R/P/M
VCO
PC
LIMIT
BF
MUTE CONT
R
P
IC4001
AN6391NS
LINE
Ear
MUT
1/2 Vcc
HOLD
AMP
MMT
TPG
X2
D.O.DET
C4011
16V2.2
C4012
5600P
C4016
4V22
C4018
5600P
C4019
10
R4023
100K
C4020
100P
C4021
330P
C4022
1000P
R4027
18K
R4028
6800
C4017
1.0
TP4001
C4013
25V2.2
R4021
4700
R4022
8200
C4014
560P
R4024
3900
R4026
6800
R4025
6800
Q4006
2SC3929
C4023
2200P
C4025
1000P
C4024
470P
Q4005
2SA1531
C4044
1.0
C4045
4V47
C4043
1200P
R4038
16K
C4042
56P
C4041
1.0
R4039
47K
C4040
2700P
R4036
10K
C4039
120P
R4037
18K
I.V CONST
AMP1
AMP2
1K
D
E
LEVEL SENSOR
CCA
CCA AMP
ED CONT
10K
C4032
10
R4031
10K
C4031
4700P
C4033
16V10
C4034
25V2.2
R4032
5600
C4035
4V22
C4036
100P
R4033
150
R4035
10K
C4038
25V4.7
IC4002
AN6297S
C4050
25V4.7
R4034
6800
C4037
330P
VR4002
2KB
PB LEVEL ADJ
VR4003
20KB
DEV ADJ


EE Ⓗ/VV Ⓛ
AUDIO MUTE Ⓗ
POWER SAVE 5V
GND
(TO SYSTEM CTL)
L4001 100µ
D4001 MA141K
C4053 6.3V150
FL4001 VLF0746
1.5M BPF
R4045 1500
R4041 12K
Q4001 2SD1819
C4054 0.01
C4048 0.01
R4040 3300
R4054 680
R4043 680
R4042 4700
C4046 0.01
R4051 2200
TP4002
PB FM-A
REC FM-A
D.H.SW
(TO SUB VIDEO)
Q4007 2SC3931
R4052 1K
L4002 120µ
L4003 120µ
C4049 100P
C4051 180P
R4053 1K
C4052 82P
R4029 1800
C4026 82P
C4044 1.0
C4045 4V47
C4043 1200P
R4038 16K
C4042 56P
C4041 1.0
R4039 47K
C4040 2700P
R4036 10K
C4039 120P
R4037 18K
PC
LIMIT
BF
TPG
D.O.DET
I.V CONST
AMP1
AMP2
1K
D
E
LEVEL SENSOR
CCA
CCA AMP
10K
ED CONT
C4020 100P
C4021 330P
R4027 18K
R4028 6800
C4032 10
R4031 10K
C4031 4700P
R4032 5600
C4033 16V10
C4034 25V2.2
C4035 4V22
C4036 100P
R4033 150
R4035 10K
C4038 25V4.7
IC4002 AN6297S
C4050 25V4.7
R4034 6800
C4037 330P
Q4006 2SC3929
VR4002 2KB
VR4003 20KB
PB LEVEL ADJ
DEV ADJ

Oszillogramm des FM-Tonteiles
FM Audio Circuit Waveform



TP4001 PLAY
0.2V/1.0msec. div.

Spannungstabelle der FM-Tonteil-IC's
FM Audio IC's Voltage Chart

REF. NO.	IC4001																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	2.7	0	2.1	2.7	2.7	2.2	2.3	2.1	4.8	0	0	0.4	2.6	2.3	2.4	0	3.0	3.6
REC	2.7	0	2.1	2.7	2.9	3.6	2.5	2.3	4.8	0	2.4	0	3.8	2.5	2.4	0	3.2	3.2

REF. NO.	IC4001																	
MODE	19	20	21	22	23	24	25	26	27	28								
PLAY	4.3	4.0	4.6	3.6	2.8	0	2.7	2.7	2.7	0								
REC	0.7	4.0	4.0	4.0	2.8	0	2.7	2.7	2.7	0								

REF. NO.	IC4002																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	1.3	1.0	0	1.7	0.6	2.4	2.2	2.2	0	2.4	2.4	2.4	0.6	2.4	2.4	2.4	2.4
REC	0	2.4	0.9	2.2	2.2	0.6	2.4	0	2.4	4.9	2.4	2.4	2.4	0.6	2.4	2.4	2.4	2.4

REF. NO.	IC4002																	
MODE	19	20																
PLAY	4.8	2.4																
REC	4.8	2.4																

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.
DC voltages tol. ± 15 % measured with digital voltmeter against GND.

Darstellung der Hauptplatine auf den Ausschlagseiten 2-89 bis 2-91.
For the Main Board Diagram refer to the foil out page 2-89 to 2-91.

Spannungstabelle des Servoteiles
Servo Voltage Chart

REF. NO.	IC2001																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	3.1	1.0	0	4.2	0	0	0.2	3.9	2.5	2.5	2.6	3.1	5.0	0	0	0	0	1.5
STOP	0	0	0	0.3	0	0	0	0.2	0.4	0	0.6	0.6	0	0.3	0	1.3	0	0

REF. NO.	IC2001																	
MODE	19	20	21	22	23	24	25	26	27	28								
PLAY	1.5	1.5	1.5	1.5	1.5	0	1.0	0	0	1.0								
STOP	0	0	0	0	0	0	0	0	0	0								

REF. NO.	IC2002									IC2003								
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	
PLAY	0.2	0	0	0	2.5	2.5	0	5.0		0	0.5	−0.4	0	2.5	2.5	1.2	5.0	
STOP	0	0	0	0	0.5	0.2	0.2	0.4		0.4	0.3	0	0	0.5	0.3	0.4	0.4	

REF. NO.	IC2004																	
MODE	1	2	3	4	5	6	7	8										
PLAY	7.7	8.0	0	1.9	5.0	0	0	0										
STOP	7.5	8.0	0	0	0.1	0.1	0.1	0.1										

REF. NO.	IC2006																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
PLAY	0	5.0	2.5	2.5	2.5	2.5	0	0	4.9	4.9	0	2.5	2.5	5.0				
STOP	0.2	0.2	0.2	0	0	0.2	0	0.7	1.3	0	0.7	1.0	0	0.5				

REF. NO.	IC2005																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	0	1.2	0.3	2.5	2.5	2.5	2.5	2.7	2.5	2.5	2.5	2.3	5.0	4.9	1.4	0	5.0
STOP	0	0	0.5	0.6	0.3	0.5	0.7	0.5	0.4	0.6	0.5	0.6	0.7	0.5	0.5	0.2	0	0.2

REF. NO.	IC2005																	
MODE	19	20	21	22	23	24	25	26	27	28								
PLAY	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0								
STOP	0.6	1.0	0.6	1.1	0.5	0.5	0.1	0.1	0.2	0.1								

REF. NO.	IC2007																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	4.9	2.5	2.5	2.4	4.8	4.7	3.9	2.5	1.7	2.0	1.7	1.9	3.0	0	2.5	2.0	2.3	3.8
STOP	4.9	2.5	1.4	2.3	4.7	4.7	3.8	2.5	1.7	1.8	1.7	1.8	2.0	0	2.4	0	2.3	[illegible]

REF. NO.	IC2007																	
MODE	19	20																
PLAY	0	0																
STOP	0	0																

REF. NO.	IC2008																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
PLAY	3.2	2.5	3.0	2.5	2.5	0	0	0	0	0.1	0.1	2.5	2.7	2.5	1.4	0.3		
STOP	1.1	1.1	0.4	0	0.6	0	0	0	0	0.7	0.2	0.5	0.4	0.2	[illegible]	0.4		

REF. NO.	IC2009																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	4.8	4.3	0	4.7	2.5	0	2.4	0	0.1	2.6	2.6	0	5.0	0	2.4	0	0	0
STOP	4.8	4.3	0	2.6	0	0	2.4	0	0.8	2.5	2.5	2.5	0	0	0	0	0	0

REF. NO.	IC2009																	
MODE	19	20	21	22	23	24	25	26	27	28								
PLAY	5.0	0	0	0	2.6	3.6	2.5	0	2.5	5.0								
STOP	5.0	2.0	0.5	0.2	0.4	0.4	0	0	0	0.4								

REF. NO.	IC2010																	
MODE	1	2	3	4	5	6	7	8										
PLAY	0	0	3.6	0	0	0	0.1	5.0										
STOP	0.2	0.7	0.5	0	0	0	0.2	0										

REF. NO.	IC2011									IC2012								
MODE	1	2	3	4	5	6	7	8		1	2	3	4					
PLAY	7.6	8.0	0	2.5	5.0	2.5	0	0		0	2.0	5.0	0					
STOP	7.5	8.0	0	0	0.8	0.4	0	0		0	1.2	0	0					

REF. NO.	Q2001			Q2002			Q2003			Q2004			Q2005			Q2006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	4.9	0	3.5	0	2.6	3.6	0	2.9	2.9	5.0	3.3	2.9	5.0	3.5	8.0	2.3	7.7
STOP	0	0.4	0.1	1.4	0	1.8	2.6	0	3.2	0.1	5.0	0.2	0.1	0.9	0.7	7.9	7.9	7.2

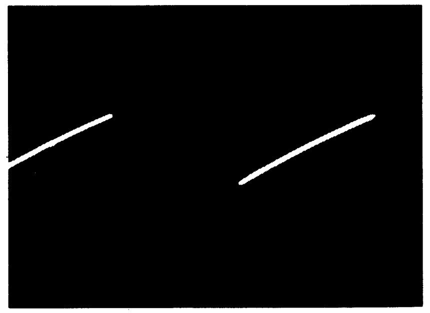
REF. NO.	Q2007			QR2001			QR2002			QR2003			QR2004			QR2005		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	8.0	3.2	7.6	2.5	2.5	0	3.7	3.6	4.9	3.5	3.4	0	0	0	0	0	0	4.9
STOP	7.9	7.9	7.3	2.5	0.2	0	0	0.7	0.7	0.8	0	0.8	0	0.8	0	0	0	4.9

REF. NO.	QR2006																	
MODE	E	C	B															
PLAY	0	0.3	0															
STOP	0	0	1.3															

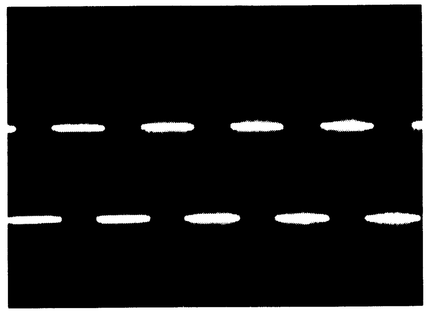
Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.
DC voltages tol. ± 15 % measured with digital voltmeter against GND.

Darstellung der Hauptplatine auf den Ausschlagseiten 2-89 bis 2-91.
For the Main Board Diagram refer to the foil out page 2-89 to 2-91.

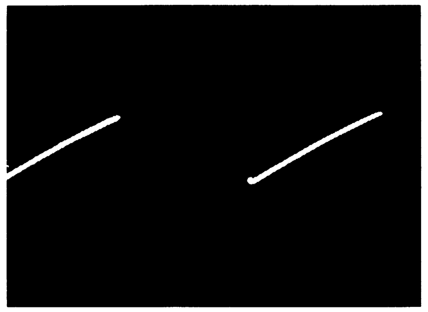
Oszillogramme des Servoteiles
Servo Circuit Waveforms



TP2001 PLAY/REC
0.5V/5msec. div.

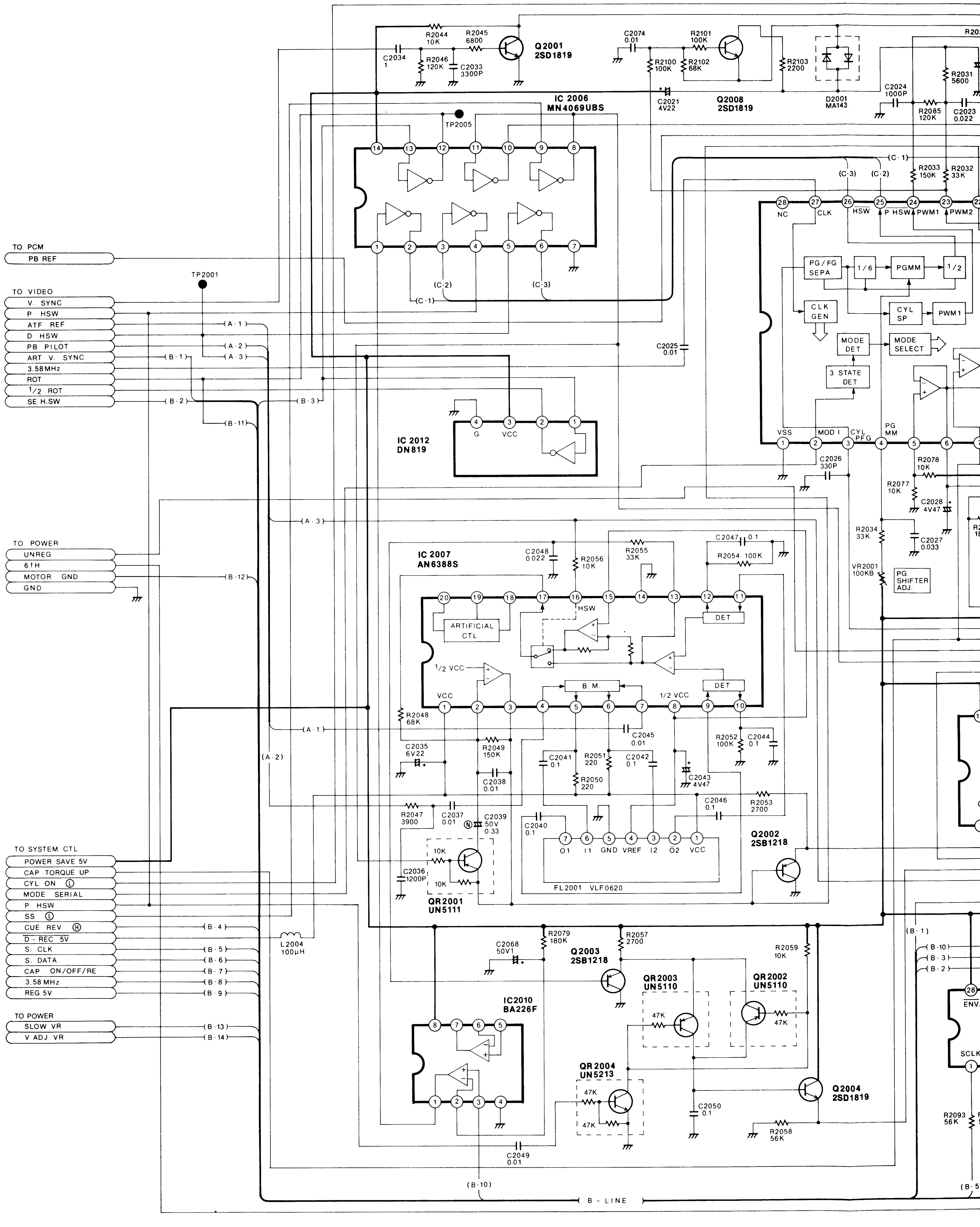


TP2003 PLAY
2.0V/0.5msec. div.



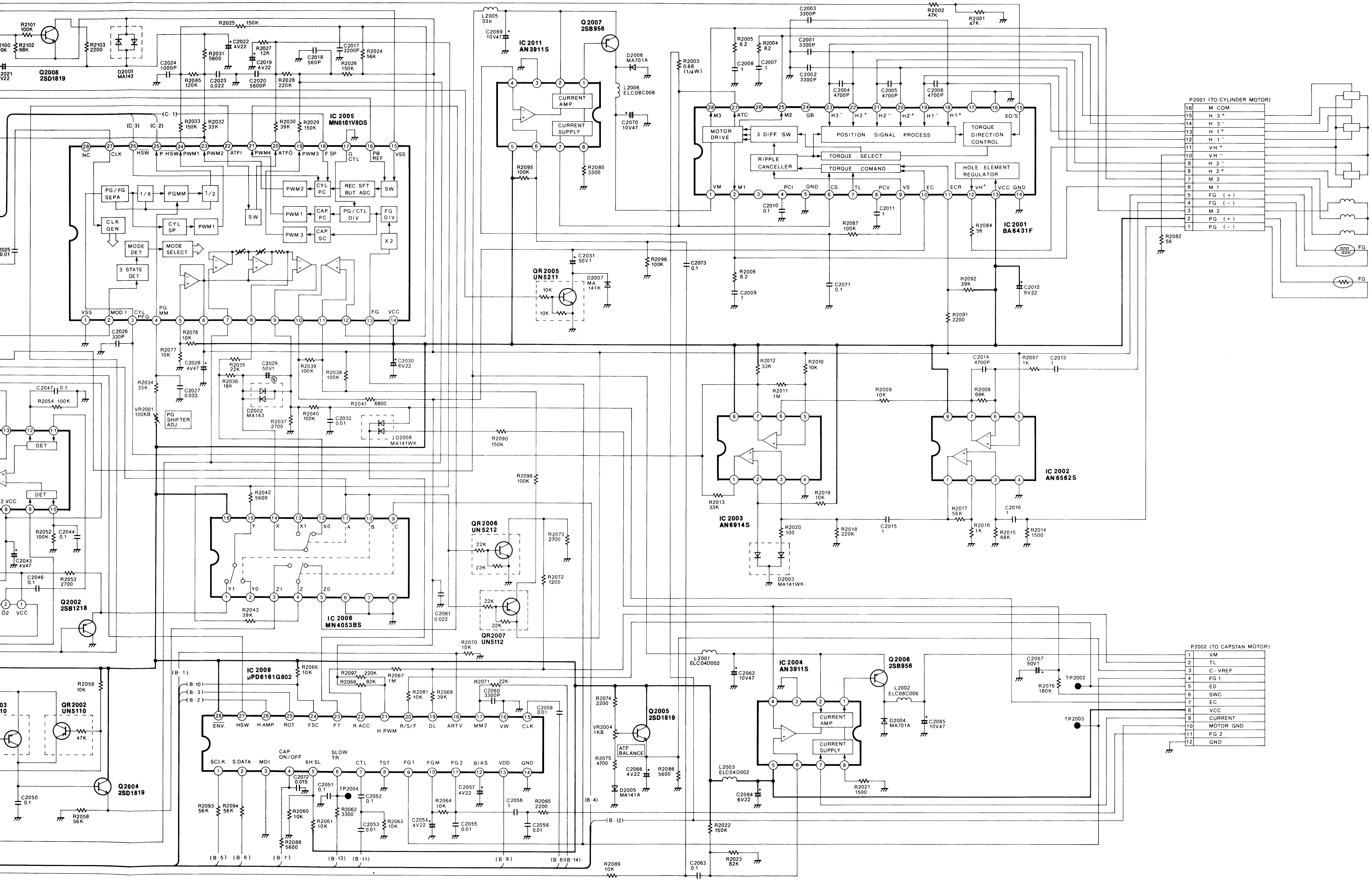
TP2005 PLAY/REC
0.5V/5msec. div.

Schaltbild des Servoteiles
Servo Schematic Diagram

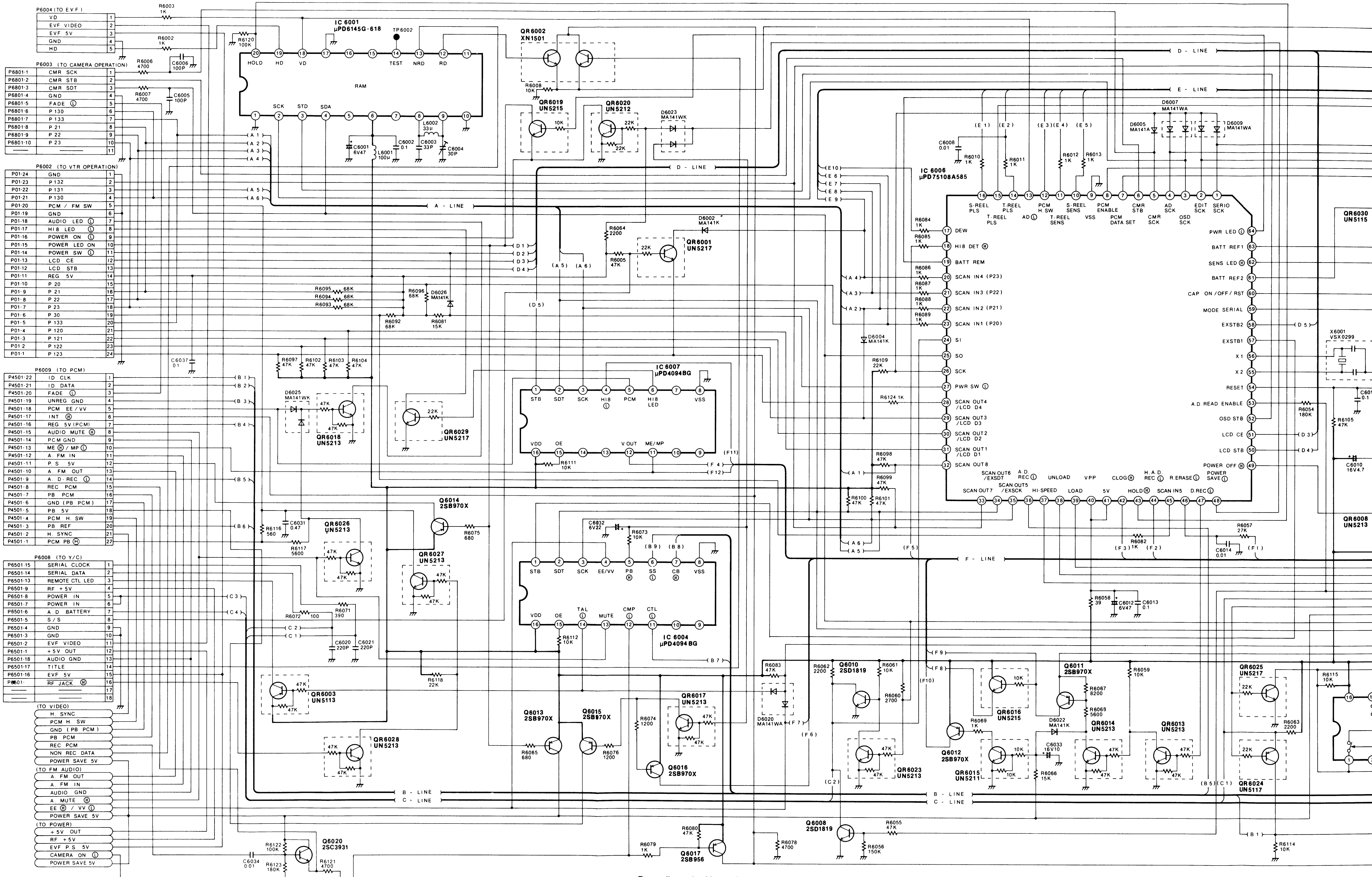


Q2001
2SD1819
Q2008
2SD1819
IC 2006
MN4069UBS
TP2005
TP2001
IC 2012
DN819
IC 2007
AN6388S
IC2010
BA226F
Q2002
2SB1218
Q2003
2SB1218
Q2004
2SD1819
QR2001
UN5111
QR2002
UN5110
QR2003
UN5110
QR2004
UN5213
FL2001 VLF0620
D2001
MA143
L2004
100µH
TO PCM
PB REF
TO VIDEO
V SYNC
P HSW
ATF REF
D HSW
PB PILOT
ART V. SYNC
3.58MHz
ROT
1/2 ROT
SE H.SW
TO POWER
UNREG
6 fH
MOTOR GND
GND
TO SYSTEM CTL
POWER SAVE 5V
CAP TORQUE UP
CYL ON
MODE SERIAL
P HSW
SS
CUE REV
D-REC 5V
S. CLK
S. DATA
CAP ON/OFF/RE
3.58 MHz
REG 5V
TO POWER
SLOW VR
V ADJ VR
ARTIFICIAL CTL
HSW
DET
B.M.
1/2 VCC
VCC
PG/FG SEPA
1/6
PGMM
1/2
CLK GEN
CYL SP
PWM1
MODE DET
MODE SELECT
3 STATE DET
NC
CLK
P HSW
PWM1
PWM2
VSS
MOD I
CYL PFG
PG MM
PG SHIFTER ADJ.
VR2001 100KB
O1 I1 GND VREF I2 O2 VCC
ENV
SCLK
B - LINE

Schaltbild des Servoteiles
Servo Schematic Diagram

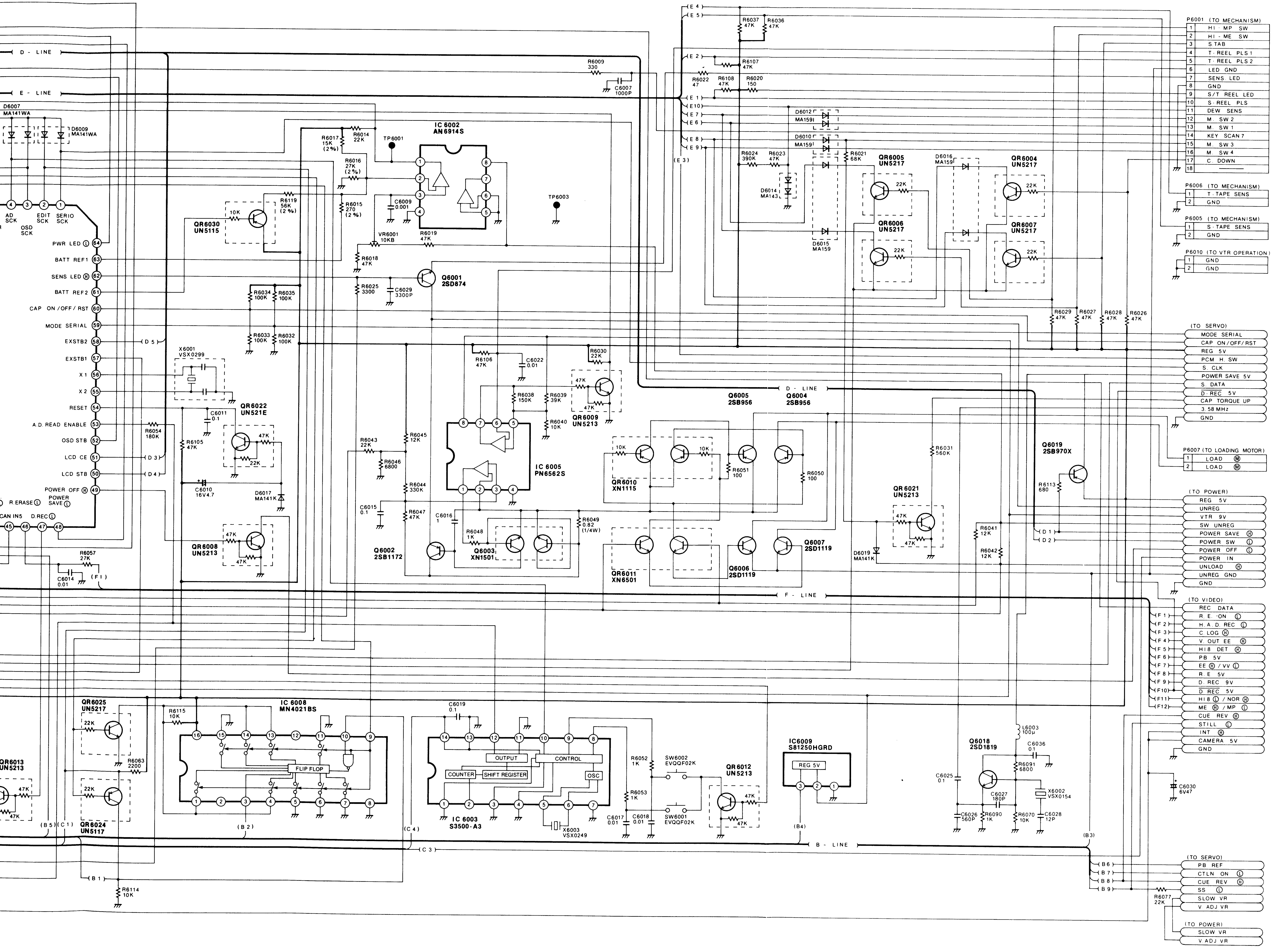

IC 2005 MN6181V8DS
NC CLK HSW P HSW PWM1 PWM2 ATFI PWM4 ATFO PWM3 F SP G CTL PB REF VSS
PG/FG SEPA 1/6 PGMM 1/2 CLK GEN CYL SP PWM1 MODE DET MODE SELECT 3 STATE DET
PWM2 CYL PC REC SFT BUT ASC SW PWM1 CAP PC PG/CTL DIV FG DIV PWM3 CAP SC X 2
VSS MOD I CYL PFG PG MM FG VCC
PG SHIFTER ADJ.
VR2001 100KB
Q2008 2SD1819
D2001 MA143
D2002 MA143
D2008 MA141WK
IC 2011 AN3911S
CURRENT AMP
CURRENT SUPPLY
Q2007 2SB956
D2006 MA701A
L2006 ELC08C006
L2005 33μ
QR2005 UN5211
D2007 MA 141K
IC 2001 BA6431F
M3 ATC M2 GB H3⁻ H3⁺ H2⁻ H2⁺ H1⁻ H1⁺ ED/S
MOTOR DRIVE 3 DIFF. SW POSITION SIGNAL PROCESS TORQUE DIRECTION CONTROL
RIPPLE CANCELLER TORQUE SELECT TORQUE COMAND HOLE ELEMENT REGULATOR
VM M1 PCI GND CS TL PCV VS EC ECR VH⁺ VCC GND
P2001 (TO CYLINDER MOTOR)
16 M COM
15 H 3⁺
14 H 3⁻
13 H 1⁺
12 H 1⁻
11 VH⁺
10 VH⁻
9 H 2⁻
8 H 2⁺
7 M 3
6 M 1
5 FG (+)
4 FG (−)
3 M 2
2 PG (+)
1 PG (−)
FG
FG
IC 2003 AN6914S
IC 2002 AN6562S
D2003 MA141WK
IC 2008 MN4053BS
Y X X1 X0 A B C Y1 Y0 Z1 Z Z0
QR2006 UN5212
QR2007 UN5112
IC 2009 μPD6161G802
ENV. HSW H AMP ROT FSC FT R ACC R/S/F DL ARTV MM2 VW CLK H.PWM
SCLK S DATA MOI CAP ON/OFF 6H SL SLOW TR CTL TST FG1 FGM FG2 BIAS VDD GND
TP2004
Q2005 2SD1819
VR2004 1KB
ATF BALANCE
D2005 MA141A
L2001 ELC04D002
L2003 ELC04D002
IC 2004 AN3911S
CURRENT AMP
CURRENT SUPPLY
Q2006 2SB956
L2002 ELC08C006
D2004 MA701A
TP2002
TP2003
P2002 (TO CAPSTAN MOTOR)
1 VM
2 TL
3 C-VREF
4 FG 1
5 ED
6 SWC
7 EC
8 VCC
9 CURRENT
10 MOTOR GND
11 FG 2
12 GND
Q2002 2SB1218
QR2002 UN5110
Q2004 2SD1819
DET
DET
(B-1) (B-2) (B-3) (B-4) (B-5) (B-6) (B-7) (B-8) (B-9) (B-10) (B-11) (B-12) (B-13) (B-14)
(C-1) (C-2) (C-3)

Schaltbild der Systemsteuerung
System Control Schematic Diagram


P6004 (TO E V F)
VD
EVF VIDEO
EVF 5V
GND
HD
P6003 (TO CAMERA OPERATION)
CMR SCK
CMR STB
CMR SDT
GND
FADE Ⓛ
P 130
P 133
P 21
P 22
P 23
P6002 (TO VTR OPERATION)
GND
P 132
P 131
P 130
PCM / FM SW
GND
AUDIO LED Ⓛ
HI 8 LED Ⓛ
POWER ON Ⓛ
POWER LED ON
POWER SW Ⓛ
LCD CE
LCD STB
REG 5V
P 20
P 21
P 22
P 23
P 30
P 133
P 120
P 121
P 122
P 123
P6009 (TO PCM)
ID CLK
ID DATA
FADE Ⓛ
UNREG GND
PCM EE / VV
INT Ⓗ
REG 5V (PCM)
AUDIO MUTE Ⓗ
PCM GND
ME Ⓗ / MP Ⓛ
A. FM IN
P. S 5V
A FM OUT
A D-REC Ⓛ
REC PCM
PB PCM
GND (PB PCM)
PB 5V
PCM H. SW
PB REF
H. SYNC
PCM PB Ⓗ
P6008 (TO Y/C)
SERIAL CLOCK
SERIAL DATA
REMOTE CTL LED
RF +5V
POWER IN
POWER IN
A D BATTERY
S / S
GND
GND
EVF VIDEO
+5V OUT
AUDIO GND
TITLE
EVF 5V
RF JACK Ⓗ
(TO VIDEO)
H. SYNC
PCM H. SW
GND (PB PCM)
PB PCM
REC PCM
NON REC DATA
POWER SAVE 5V
(TO FM AUDIO)
A. FM OUT
A. FM IN
AUDIO GND
A. MUTE Ⓗ
EE Ⓗ / VV Ⓛ
POWER SAVE 5V
(TO POWER)
+5V OUT
RF +5V
EVF P.S 5V
CAMERA ON Ⓛ
POWER SAVE 5V
IC 6001
µPD6145G-618
RAM
TP6002
QR6002 XN1501
QR6019 UN5215
QR6020 UN5212
D6023 MA141WK
QR6001 UN5217
D6002 MA141K
IC 6006
µPD75108A585
D6007 MA141WA
D6005 MA141A
D6009 MA141WA
QR6030 UN5115
X6001 VSX0299
IC 6007
µPD4094BG
IC 6004
µPD4094BG
D6025 MA141WK
QR6018 UN5213
QR6029 UN5217
D6026 MA141K
D6004 MA141K
Q6014 2SB970X
QR6026 UN5213
QR6027 UN5213
QR6003 UN5113
QR6028 UN5213
Q6013 2SB970X
Q6015 2SB970X
QR6017 UN5213
Q6016 2SB970X
D6020 MA141WA
Q6010 2SD1819
Q6011 2SB970X
QR6016 UN5215
D6022 MA141K
QR6014 UN5213
Q6012 2SB970X
QR6015 UN5211
QR6023 UN5213
QR6013 UN5213
QR6025 UN5217
QR6024 UN5117
QR6008 UN5213
Q6008 2SD1819
Q6017 2SB956
Q6020 2SC3931
A - LINE
B - LINE
C - LINE
D - LINE
E - LINE
F - LINE

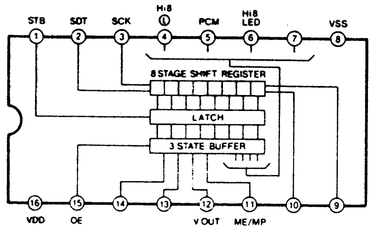
Darstellung der Hauptplatine auf den Ausschlagseiten 2-89 bis 2-91.
For the Main Board Diagram refer to the foil out page 2-89 to 2-91.

Schaltbild der Systemsteuerung
System Control Schematic Diagram



D - LINE
E - LINE
F - LINE
B - LINE
D6007 MA141WA
D6009 MA141WA
IC 6002 AN6914S
TP6001
TP6003
QR6030 UN5115
VR6001 10KB
Q6001 2SD874
X6001 VSX0299
QR6022 UN521E
C6010 16V4.7
D6017 MA141K
QR6008 UN5213
IC 6005 PN6562S
QR6009 UN5213
Q6002 2SB1172
Q6003 XN1501
QR6010 XN1115
QR6011 XN6501
Q6005 2SB956
Q6004 2SB956
Q6006 2SD1119
Q6007 2SD1119
QR6005 UN5217
QR6006 UN5217
QR6004 UN5217
QR6007 UN5217
D6012 MA159I
D6010 MA159I
D6014 MA143
D6015 MA159
D6016 MA159I
QR6021 UN5213
D6019 MA141K
Q6019 2SB970X
QR6025 UN5217
QR6024 UN5117
QR6013 UN5213
IC 6008 MN4021BS
FLIP FLOP
IC 6003 S3500-A3
OUTPUT
CONTROL
COUNTER
SHIFT REGISTER
OSC
X6003 VSX0249
SW6002 EVQQF02K
SW6001 EVQQF02K
QR6012 UN5213
IC6009 S81250HGRD
REG 5V
Q6018 2SD1819
L6003 100μ
X6002 VSX0154
C6030 6V47
PWR LED Ⓛ 64
BATT REF1 63
SENS LED Ⓗ 62
BATT REF2 61
CAP ON / OFF / RST 60
MODE SERIAL 59
EXSTB2 58
EXSTB1 57
X1 56
X2 55
RESET 54
A.D. READ ENABLE 53
OSD STB 52
LCD CE 51
LCD STB 50
POWER OFF Ⓗ 49
AD SCK
EDIT SCK
SERIO SCK
OSD SCK
R.ERASE Ⓛ
POWER SAVE Ⓛ
CAN INS
D.REC Ⓛ
P6001 (TO MECHANISM)
1 HI · MP SW
2 HI · ME SW
3 S.TAB
4 T.REEL PLS 1
5 T.REEL PLS 2
6 LED GND
7 SENS LED
8 GND
9 S/T REEL LED
10 S.REEL PLS
11 DEW SENS
12 M. SW 2
13 M. SW 1
14 KEY SCAN 7
15 M. SW 3
16 M. SW 4
17 C. DOWN
18
P6006 (TO MECHANISM)
1 T.TAPE SENS
2 GND
P6005 (TO MECHANISM)
1 S.TAPE SENS
2 GND
P6010 (TO VTR OPERATION)
1 GND
2 GND
(TO SERVO)
MODE SERIAL
CAP ON/OFF/RST
REG 5V
PCM H. SW
S. CLK
POWER SAVE 5V
S. DATA
D. REC 5V
CAP TORQUE UP
3.58 MHz
GND
P6007 (TO LOADING MOTOR)
1 LOAD Ⓜ
2 LOAD Ⓜ
(TO POWER)
REG 5V
UNREG
VTR 9V
SW UNREG
POWER SAVE Ⓗ
POWER SW Ⓛ
POWER OFF Ⓛ
POWER IN
UNLOAD Ⓗ
UNREG GND
GND
(TO VIDEO)
REC DATA
R.E. ON Ⓛ
H.A.D. REC Ⓛ
C.LOG Ⓗ
V. OUT EE Ⓗ
HI8 DET Ⓗ
PB 5V
EE Ⓗ / VV Ⓛ
R.E. 5V
D. REC 9V
D. REC 5V
HI8 Ⓛ / NOR Ⓗ
ME Ⓗ / MP Ⓛ
CUE REV Ⓗ
STILL Ⓛ
INT Ⓗ
CAMERA 5V
GND
(TO SERVO)
PB REF
CTLN ON Ⓛ
CUE REV Ⓗ
SS Ⓛ
SLOW VR
V. ADJ VR
(TO POWER)
SLOW VR
V. ADJ VR

Blockschaltbild der IC's 6004 und 6007
IC's 6004 and 6007 Block Diagram
(μPD 4094 BG)



STB
SDT
SCK
Hi8 Ⓛ
PCM
Hi8 LED
VSS
8 STAGE SHIFT REGISTER
LATCH
3 STATE BUFFER
VDD
OE
VOUT
ME/MP

Spannungstabelle der Systemsteuerung
System Control Voltage Chart

REF. NO.	IC6001																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	4.9	0.2	0	0	5.0	0	2.8	2.8	0	0	0	0	0	0	0	0	0.1
STOP	0	4.9	0.2	4.4	0	5.0	0	2.8	2.8	0	0	0	0	0	0	0.5	0	2.0

REF. NO.	IC6001									IC6002								
MODE	19	20								1	2	3	4	5	6	7	8	
PLAY	0	4.9								5.0	0	4.3	0	0	0	0.1	8.0	
STOP	2.0	5.0								5.0	3.8	3.9	0	0	0	10.5	7.9	

REF. NO.	IC6003																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
PLAY	0	1.5	0	0.2	0	0.1	0	0	0.2	4.8	0.1	0.1	0.1	0.1				
STOP	0	0	0	0	0	0	0	0.5	0.5	4.8	0	0.9	0	0.6				

REF. NO.	IC6004																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
PLAY	0	0.5	0.4	0	5.0	4.9	0	0	0.3	0.3	0	5.0	0	5.0	5.0	5.0		
STOP	0	0.6	0.6	0	0.6	4.9	0	0	4.7	4.7	5.0	0	0	0	7.7	8.5		

REF. NO.	IC6005																	
MODE	1	2	3	4	5	6	7	8										
PLAY	1.2	1.5	1.5	0	0	0.1	~	9.1										
STOP	1.2	0.2	0.3	0	0.3	0.3	8.3	9.5										

REF. NO.	IC6006																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	4.9	4.7	4.8	4.8	4.9	0	0	4.9	0	4.8	4.8	2.5	0.3	~	~	0.3	0	4.8
STOP	4.8	4.7	4.9	4.8	4.9	0	0	4.9	0	4.8	4.8	5.0	0.9	0.3	0	4.6	0.1	0.1

REF. NO.	IC6006																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PLAY	5.0	1.2	0.9	1.0	0.9	2.3	4.3	4.5	5.0	0.1	0.6	0.6	0.6	0.5	0	0.6	0.6	0
STOP	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.0	0.1	0.1	0.6	0.6	0.6	0.6	0.6	0.6	0.5

REF. NO.	IC6006																	
MODE	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
PLAY	0	0	0	4.9	4.9	0	4.9	4.9	5.0	4.9	4.9	4.9	0	0	0.1	0.1	2.3	5.0
STOP	0.5	0.2	0.1	4.9	0.1	4.9	0.1	0.1	0.1	4.9	4.9	4.9	0.4	0.4	0.2	0.2	0.4	5.0

REF. NO.	IC6006																	
MODE	55	56	57	58	59	60	61	62	63	64								
PLAY	2.6	2.4	0	0	0	4.9	0	0	0.6	0								
STOP	2.6	0.4	0.4	0.4	0	0.4	0.4	0	0.6	0								

REF. NO.	IC6007																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
PLAY	0	0.6	0.6	0	0	5.0	0	0	0.4	0.4	5.0	1.0	0	0	5.0	5.0		
STOP	0	0.6	0.6	0	0.6	5.0	0	0	4.7	4.7	5.0	0	0	0	7.7	8.5		

REF. NO.	IC6008																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.0		
STOP	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	5.0		

REF. NO.	Q6001			Q6002			Q6003 Ⓛ			Q6003 Ⓡ			Q6004			Q6005		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	8.0	0	8.0	1.5	7.6	1.5	1.1	1.5	1.5	7.6	1.2	1.5	0.4	1.6	1.5	0.3	1.2
STOP	0	8.0	0	1.6	7.9	4.5	7.5	7.5	1.2	1.6	1.2	1.6	1.7	0.9	2.1	1.7	0.9	2.0

REF. NO.	Q6006			Q6007			Q6010			Q6011			Q6012			Q6013		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0.2	0	0	0.2	0	0	2.3	0	9.0	0	9.0	5.0	5.0	4.3	5.0	5.0	4.3
STOP	0	0.8	0.2	0	0.8	0.1	0	2.3	0	9.5	0	9.5	5.0	5.0	4.3	5.1	5.0	4.3

REF. NO.	Q6014			Q6015			Q6016			Q6017			Q1019			QR6001		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	5.0	5.0	4.3	5.0	5.0	4.4	5.0	4.3	5.0	5.0	0	5.0	5.0	5.0	4.3	0.9	1.2	1.4
STOP	5.0	5.0	4.3	5.0	0	5.0	5.0	0	5.0	5.1	4.9	4.3	5.0	5.0	4.2	0.9	1.2	2.4

REF. NO.	QR6002 Ⓛ			QR6002 Ⓡ			QR6004			QR6005			QR6006			QR6007		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	0	0	0	0.4	0.6	1.3	0	6.0	1.3	0	0.6	0.6	2.3	0.6	1.7	0
STOP	0.2	5.5	2.7	0.2	5.5	2.7	0.7	5.0	0	0.6	0.9	2.3	0.6	0.9	2.3	0.6	4.7	0

REF. NO.	QR6008			QR6009			QR6010 Ⓛ			QR6010 Ⓡ			QR6011 Ⓛ			QR6011 Ⓡ		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	2.3	0.3	0	5.0	8.0	1.5	1.3	1.2	1.5	1.5	1.2	0	1.2	0	0	1.2	0
STOP	0	6.3	0	0	0	8.3	2.1	1.6	2.2	2.0	1.6	2.2	2.1	2.1	2.1	2.2	0.2	0

REF. NO.	QR6012			QR6013			QR6014			QR6015			QR6016			QR6017		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	1.0	0.5	0	0	4.9	0	9.0	0	0	0	2.3	4.9	5.0	0	0	0	4.0
STOP	0	0	2.5	0	0	4.9	0	9.5	0	5.1	5.0	4.3	4.9	5.1	0	0	5.7	0

REF. NO.	QR6018			QR6019			QR6020			QR6021			QR6022			QR6023		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	3.7	0	0.1	2.1	0	0	0.1	3.8	0	2.4	0	0	5.0	0	4.0	4.9	3.9
STOP	0	0	4.6	0.1	2.1	0	0	0.1	3.8	0	1.9	0	0	5.0	0	0	0	4.0

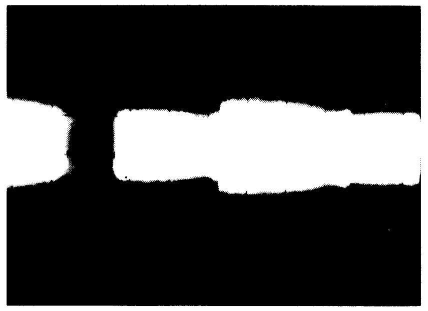
REF. NO.	QR6024			QR6025			QR6026			QR6027			QR6028			QR6029		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	4.7	0	4.9	0	0	4.9	0	0	0	0	0	0	0	0	5.0	0	0	5.0
STOP	4.7	0	4.9	0	0	4.9	0	0	0	0	0	0	0	0.1	5.0	0	0.1	5.0

REF. NO.	QR6030																	
MODE	E	C	B															
PLAY	2.0	5.0	0															
STOP	2.0	5.0	2.5															

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.

DC voltages tol. ± 15 % measured with digital voltmeter against GND.

Oszillogramm des Video-Zusatzteiles
Sub Video Circuit Waveform



TP3501 PLAY
5mV/5msec. div.

Spannungstabelle des Video-Zusatzteiles
Sub Video Voltage Chart

REF. NO.	IC3501																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	2.9	3.0	2.9	2.8	0	2.9	0	2.9	0	1.5	0	0	4.7	3.7	0	3.7	2.6	2.6
REC	2.8	4.1	2.9	2.9	0	2.9	2.8	2.9	0	1.5	4.0	4.0	4.7	2.3	0	2.3	2.6	2.6

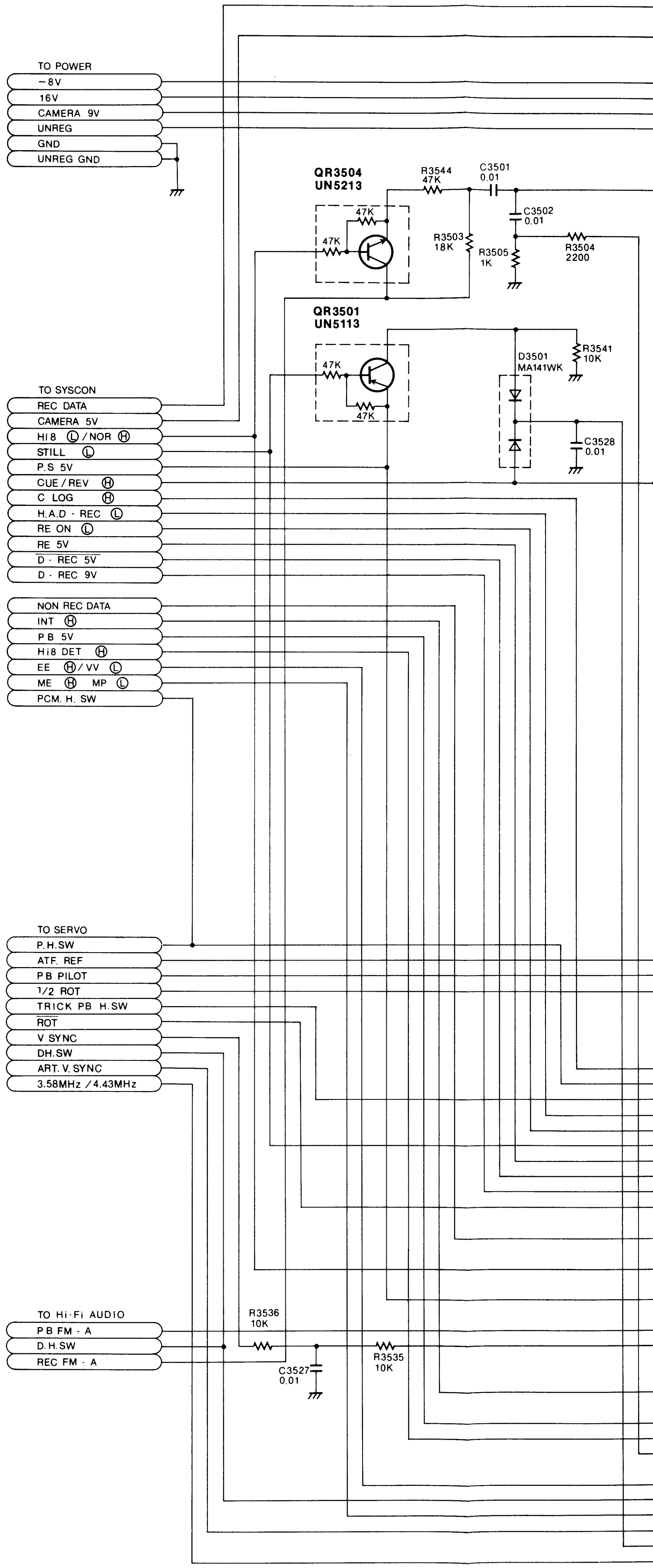
REF. NO.	IC3501																	
MODE	19	20	21	22	23	24												
PLAY	3.9	2.9	3.9	3.9	4.3	0												
REC	3.8	3.3	3.8	3.1	0	2.8												

REF. NO.	IC3502																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	4.9	2.7	2.5	4.9	2.1	2.5	3.3	1.6	0	2.5	0	0	2.6	2.6	2.4	0	0	4.6
REC	4.9	2.7	2.5	4.9	2.1	2.5	3.3	1.6	0	2.5	0	0	2.6	2.6	2.4	0	0	4.6

REF. NO.	IC3503																	
MODE	1	2	3	4	5	6	7	8										
PLAY	3.3	4.9	4.7	0	0	4.0	4.0	4.9										
REC	0	0	0	0	0	0	0	0										

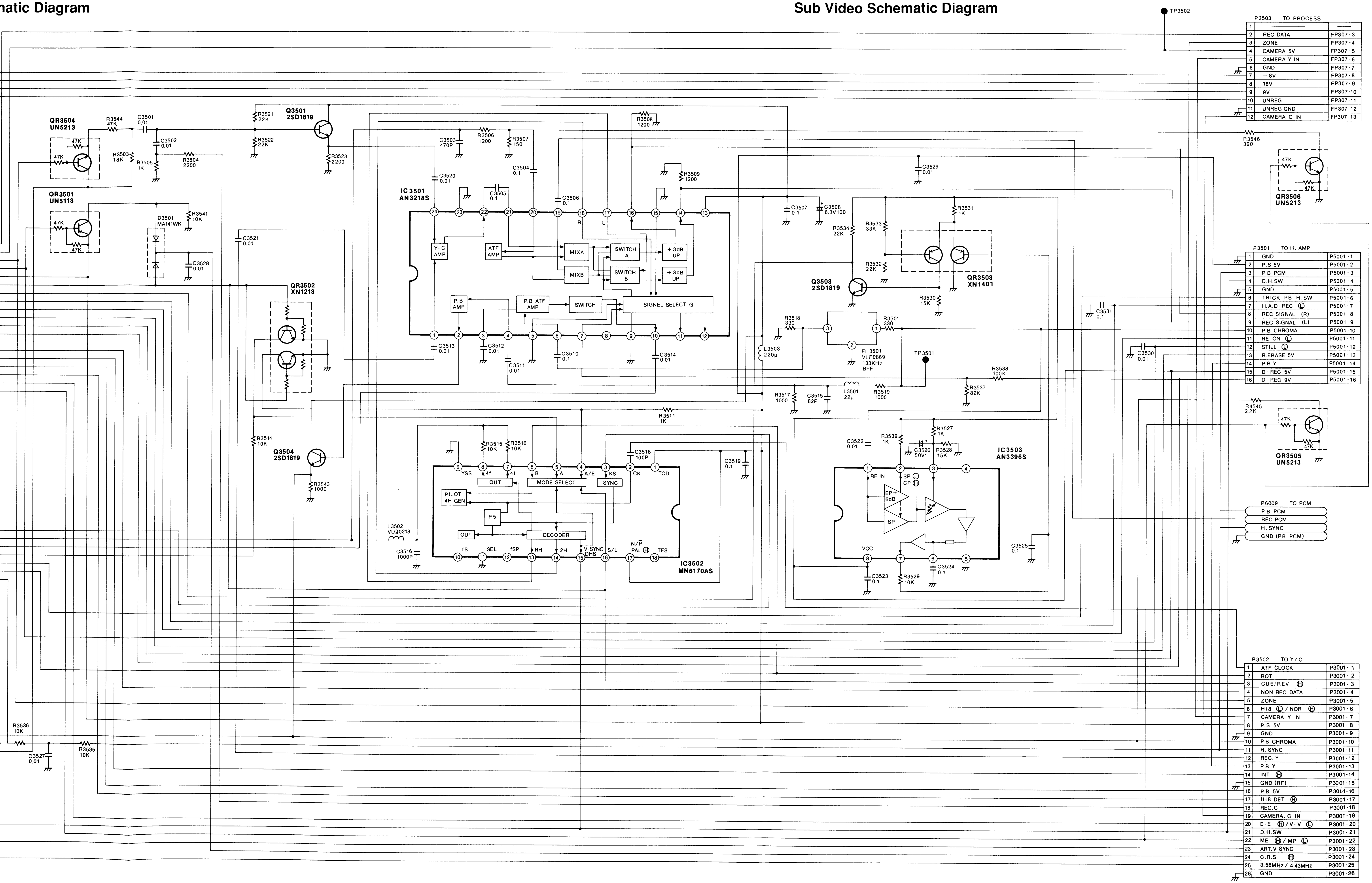
REF. NO.	Q3501			Q3504			QR3502			QR3504								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
PLAY	1.8	4.8	2.4	2.4	4.8	3.0	0	2.1	0	0	0	0						
REC	1.8	4.7	2.3	3.5	4.7	4.1	0	4.9	0	0	0	0						

Schaltbild des Video-Zusatzteiles
Sub Video Schematic Diagram


TO POWER
−8V
16V
CAMERA 9V
UNREG
GND
UNREG GND
QR3504
UN5213
47K
47K
R3544
47K
C3501
0.01
C3502
0.01
R3503
18K
R3505
1K
R3504
2200
QR3501
UN5113
47K
47K
D3501
MA141WK
R3541
10K
C3528
0.01
TO SYSCON
REC DATA
CAMERA 5V
Hi8 Ⓛ/NOR Ⓗ
STILL Ⓛ
P.S 5V
CUE/REV Ⓗ
C LOG Ⓗ
H.A.D - REC Ⓛ
RE ON Ⓛ
RE 5V
D - REC 5V
D - REC 9V
NON REC DATA
INT Ⓗ
PB 5V
Hi8 DET Ⓗ
EE Ⓗ/VV Ⓛ
ME Ⓗ MP Ⓛ
PCM. H. SW
TO SERVO
P.H.SW
ATF. REF
PB PILOT
1/2 ROT
TRICK PB H.SW
ROT
V SYNC
DH.SW
ART. V. SYNC
3.58MHz /4.43MHz
TO Hi-Fi AUDIO
PB FM - A
D.H.SW
REC FM - A
R3536
10K
C3527
0.01
R3535
10K

deo-Zusatzteiles
natic Diagram

Schaltbild des Video-Zusatzteiles
Sub Video Schematic Diagram


TP3502
QR3504
UN5213
R3544
47K
C3501
0.01
C3502
0.01
R3503
18K
R3505
1K
R3504
2200
R3521
22K
R3522
22K
Q3501
2SD1819
R3523
2200
QR3501
UN5113
D3501
MA141WK
R3541
10K
R3528
0.01
C3521
0.01
QR3502
XN1213
C3503
470P
R3506
1200
R3507
150
C3504
0.1
R3508
1200
R3509
1200
C3520
0.01
IC3501
AN3218S
C3505
0.1
C3506
0.1
Y·C AMP
ATF AMP
MIXA
MIXB
SWITCH A
SWITCH B
+3dB UP
P.B AMP
P.B ATF AMP
SWITCH
SIGNEL SELECT G
R
L
C3513
0.01
C3512
0.01
C3511
0.01
C3510
0.1
C3514
0.01
R3511
1K
R3514
10K
Q3504
2SD1819
R3543
1000
R3515
10K
R3516
10K
C3518
100P
C3519
0.1
YSS
4f
OUT
B
A
A/E
KS
CK
TOD
MODE SELECT
SYNC
PILOT 4F GEN
F5
DECODER
fS
SEL
fSP
RH
2H
V.SYNC DHS
S/L
N/P PAL Ⓗ
TES
L3502
VLQ0218
C3516
1000P
IC3502
MN6170AS
C3507
0.1
C3508
6.3V100
C3529
0.01
R3534
22K
R3533
33K
R3531
1K
R3532
22K
Q3503
2SD1819
QR3503
XN1401
R3530
15K
R3518
330
R3501
330
L3503
220µ
FL3501
VLF0869
133KHz
BPF
TP3501
R3538
100K
R3537
82K
R3517
1000
C3515
82P
L3501
22µ
R3519
1000
C3522
0.01
R3539
1K
C3526
50V1
R3527
1K
R3528
15K
IC3503
AN3396S
RF IN
SP Ⓛ
CP Ⓗ
EP + 6dB
SP
VCC
C3523
0.1
R3529
10K
C3524
0.1
C3525
0.1
C3531
0.1
C3530
0.01
R3546
390
47K
QR3506
UN5213
R4545
2.2K
QR3505
UN5213
R3536
10K
C3527
0.01
R3535
10K
P6009 TO PCM
P.B PCM
REC PCM
H.SYNC
GND (PB PCM)

P3503 TO PROCESS

1	—	—
2	REC DATA	FP307·3
3	ZONE	FP307·4
4	CAMERA 5V	FP307·5
5	CAMERA Y IN	FP307·6
6	GND	FP307·7
7	−8V	FP307·8
8	16V	FP307·9
9	9V	FP307·10
10	UNREG	FP307·11
11	UNREG GND	FP307·12
12	CAMERA C IN	FP307·13

P3501 TO H. AMP

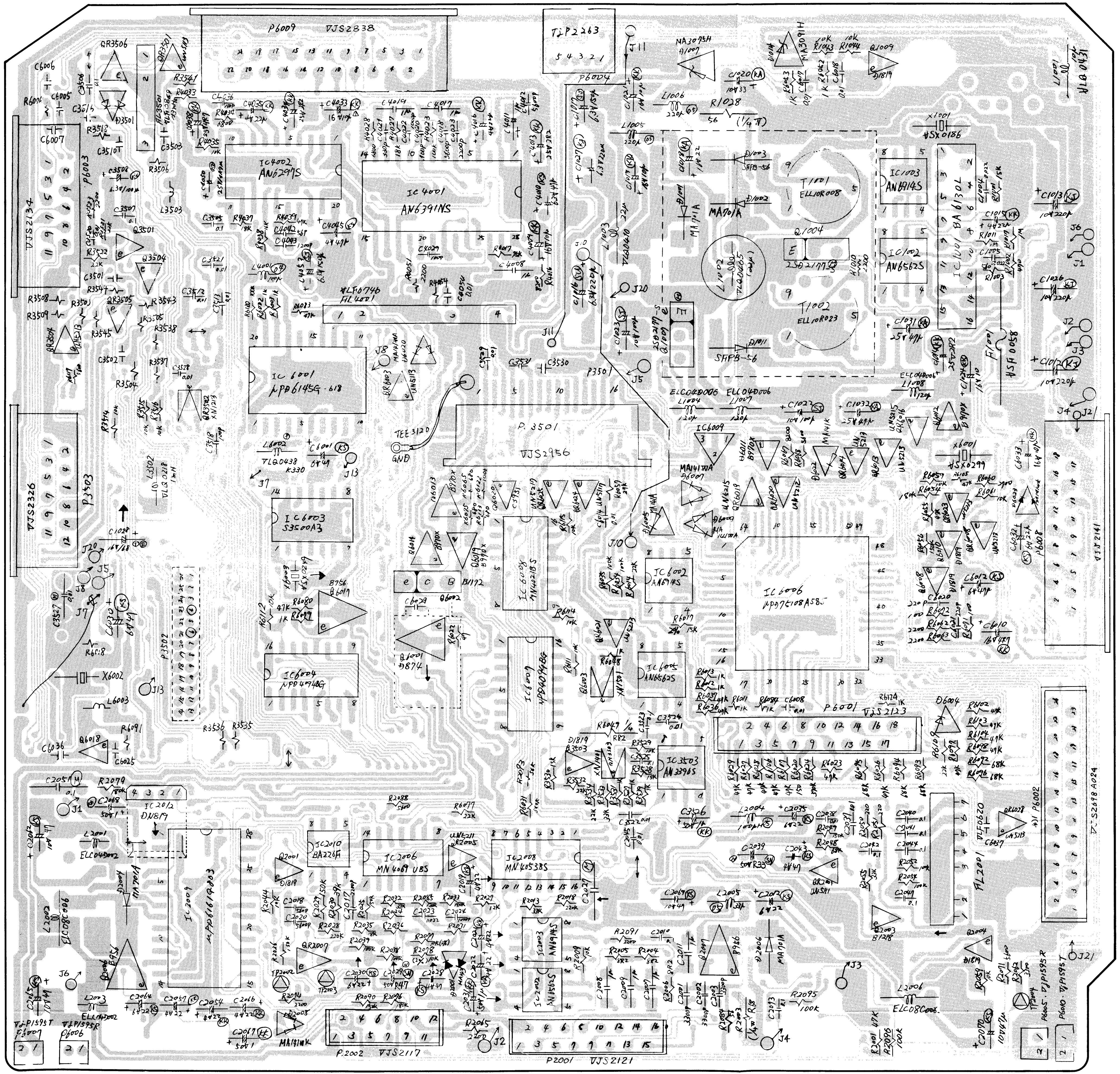
1	GND	P5001·1
2	P.S 5V	P5001·2
3	P B PCM	P5001·3
4	D.H.SW	P5001·4
5	GND	P5001·5
6	TRICK PB H.SW	P5001·6
7	H.A.D·REC Ⓛ	P5001·7
8	REC SIGNAL (R)	P5001·8
9	REC SIGNAL (L)	P5001·9
10	P B CHROMA	P5001·10
11	RE ON Ⓛ	P5001·11
12	STILL Ⓛ	P5001·12
13	R.ERASE 5V	P5001·13
14	P B Y	P5001·14
15	$\overline{\text{D·REC 5V}}$	P5001·15
16	D·REC 9V	P5001·16

P3502 TO Y/C

1	ATF CLOCK	P3001·1
2	$\overline{\text{ROT}}$	P3001·2
3	CUE/REV Ⓗ	P3001·3
4	NON REC DATA	P3001·4
5	ZONE	P3001·5
6	Hi8 Ⓛ / NOR Ⓗ	P3001·6
7	CAMERA.Y.IN	P3001·7
8	P.S 5V	P3001·8
9	GND	P3001·9
10	P B CHROMA	P3001·10
11	H. SYNC	P3001·11
12	REC. Y	P3001·12
13	P B Y	P3001·13
14	INT Ⓗ	P3001·14
15	GND (RF)	P3001·15
16	P B 5V	P3001·16
17	Hi8 DET Ⓗ	P3001·17
18	REC.C	P3001·18
19	CAMERA. C. IN	P3001·19
20	E·E Ⓗ / V·V Ⓛ	P3001·20
21	D.H.SW	P3001·21
22	ME Ⓗ / MP Ⓛ	P3001·22
23	ART.V SYNC	P3001·23
24	C.R.S Ⓗ	P3001·24
25	3.58MHz / 4.43MHz	P3001·25
26	GND	P3001·26

Darstellung der Hauptplatine auf den Ausschlagseiten 2-89 bis 2-91.
For the Main Board Diagram refer to the foil out page 2-89 to 2-91.

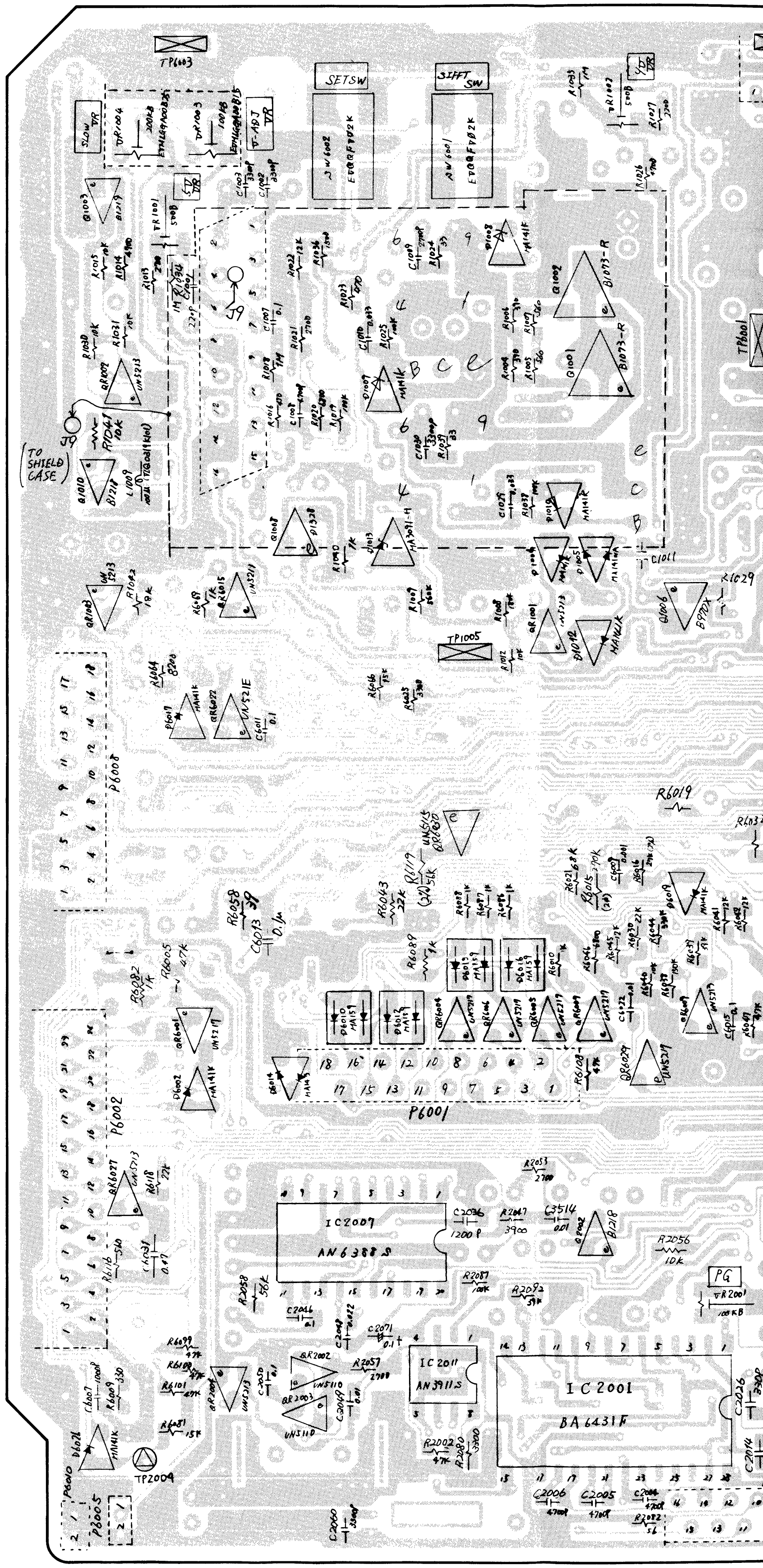
Hauptplatine (Systemsteuerungsteil, Netzteil, Servoteil, Video-Zusatzteil und Tonteil)
Main C.B.A. (System Control, Power Supply, Servo, Sub Video and FM Audio Section)



P6009 VJS2838
TJP2263
P6004
IC4002 AN6299S
IC4001 AN6391NS
IC1003 AN6914S
IC1001 BA6130L
IC1002 AN6562S
T1001 ELL10R008
T1002 ELL10R023
Q1004
IC6001 μPD6145G-618
P3501 VJS2956
IC6009
IC6003 S3500A3
IC6002 AN614S
IC6006 μPD75108AS8
IC6008 MN4021BS
IC6007 μPD4094BG
IC6004 μPD4094BG
IC6005 AN6562S
IC3503 AN3796S
P6001 VJS2123
VJS2134
VJS2326
P3502
VJS2141
VJS2698A024
P6002
IC2007 μPD6169G003
IC2012 DN819
IC2010 BA226F
IC2006 MN4069UBS
IC2008 MN4053BS
IC2003 AN9195
IC2002 AN9195
FL2001
L2006 ELC08C006
P2002 VJS2117
P2001 VJS2121
J1 J2 J3 J4 J5 J6 J7 J8 J10 J11 J13 J20 J21

COMPONENT SIDE = Bestückungsseite

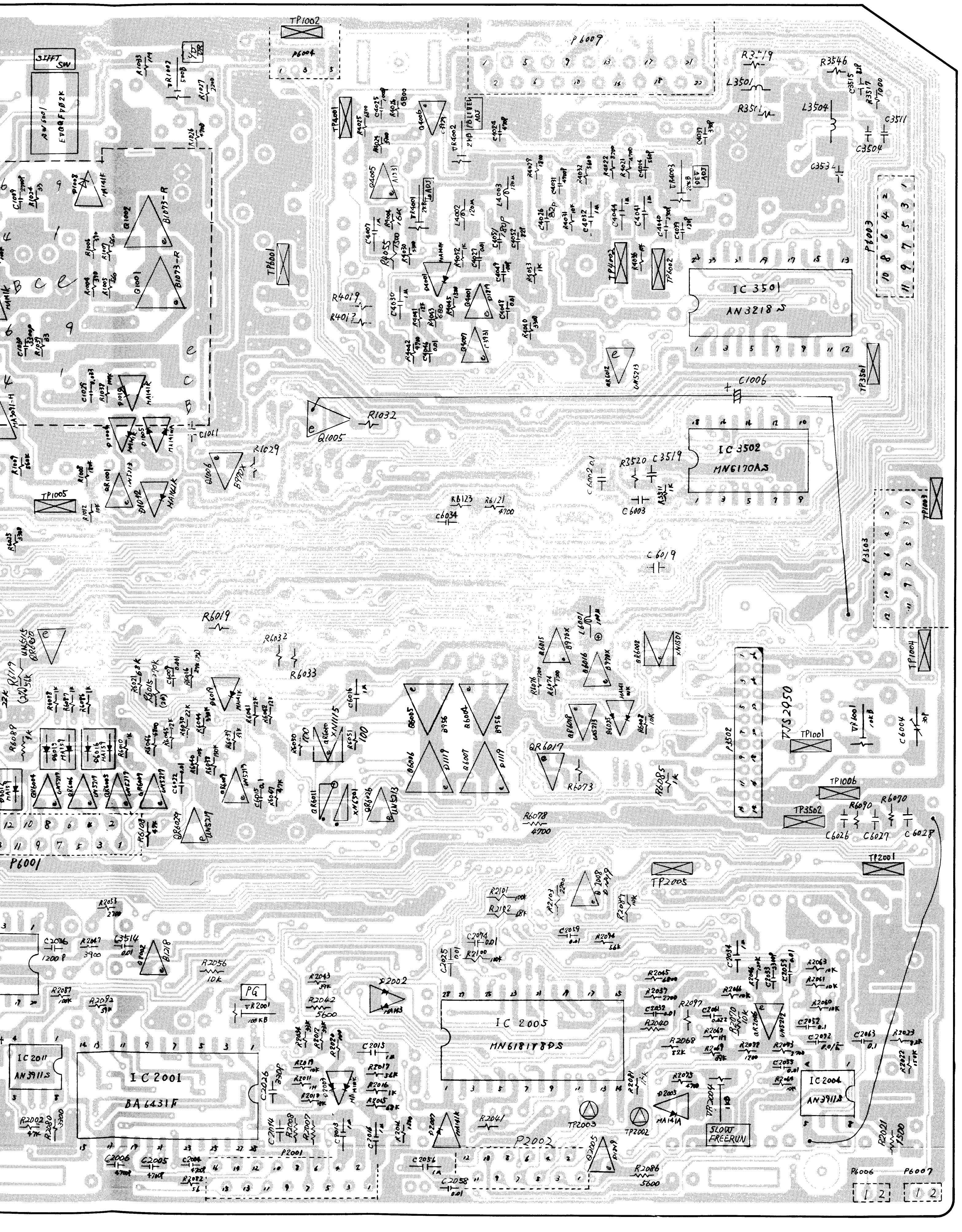
Hauptplatine
Main C.B.A. (S



TP6003
SETSW
SLOW TR
T-ADJ VR
SHIFT SW
TO SHIELD CASE
TP1005
P6008
P6002
P6001
IC2007 AN6388S
IC2011 AN3911S
IC2001 BA6431F
PG
TP2004
P6005

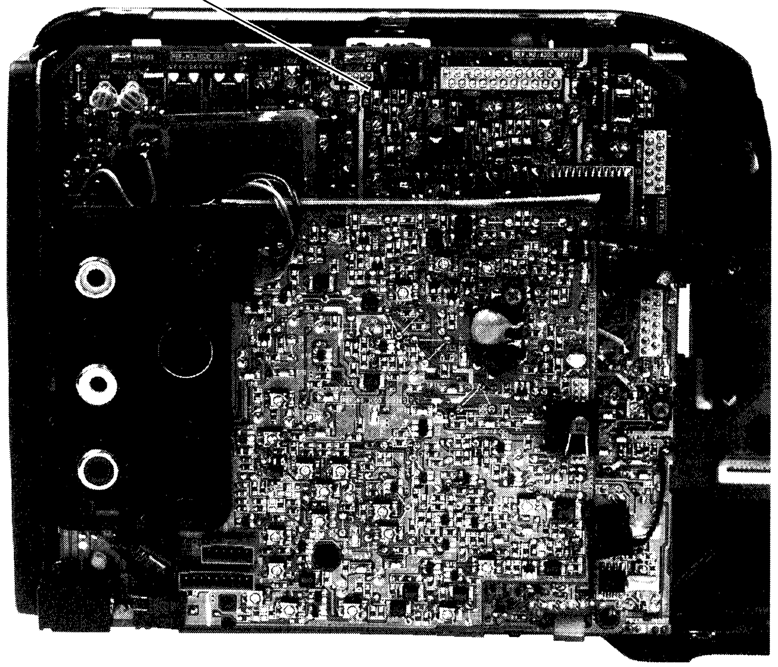
FOIL SIDE = Lötseite

Hauptplatine (Systemsteuerungsteil, Netzteil, Servoteil, Video-Zusatzteil und Tonteil)
Main C.B.A. (System Control, Power Supply, Servo, Sub Video and FM Audio Section)


IC 3501
AN3218S
IC 3502
MN6170AS
IC 2005
MN6181TBDS
IC 2001
BA6431F
IC 2011
AN3911S
IC 2004
AN3911S
SLOW FREERUN
PG
SHIFT SW
P6001
P6003
P6004
P6009
P2001
P2002
P6006
P6007
TP1001
TP1002
TP1005
TP1006
TP2001
TP2002
TP2003
TP3502
Q1005
R1032
C1006
R6019
R6032
R6033
C6019
VR2001

Positionsnummern-Gruppen auf der Hauptplatine
Position number groups of the Main C.B.A.

Hauptplatine (Systemsteuerungsteil, Netzteil, Servoteil, Video-Zusatzteil und FM-Tonteil)
Main C.B.A. (System Control, Power Supply, Servo, Sub Video and FM Audio Section)



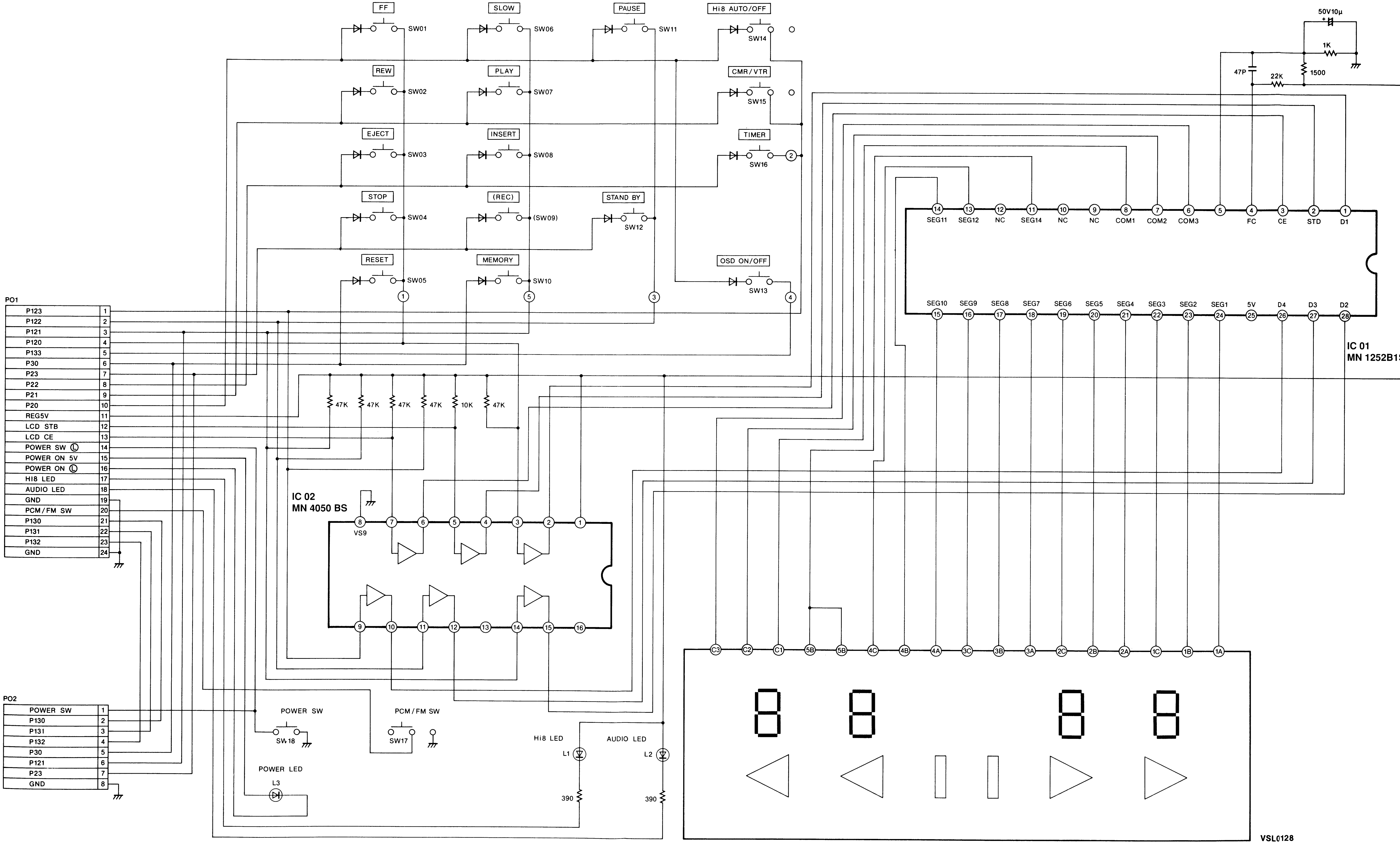
Positionsnummern-Gruppen
Position number groups

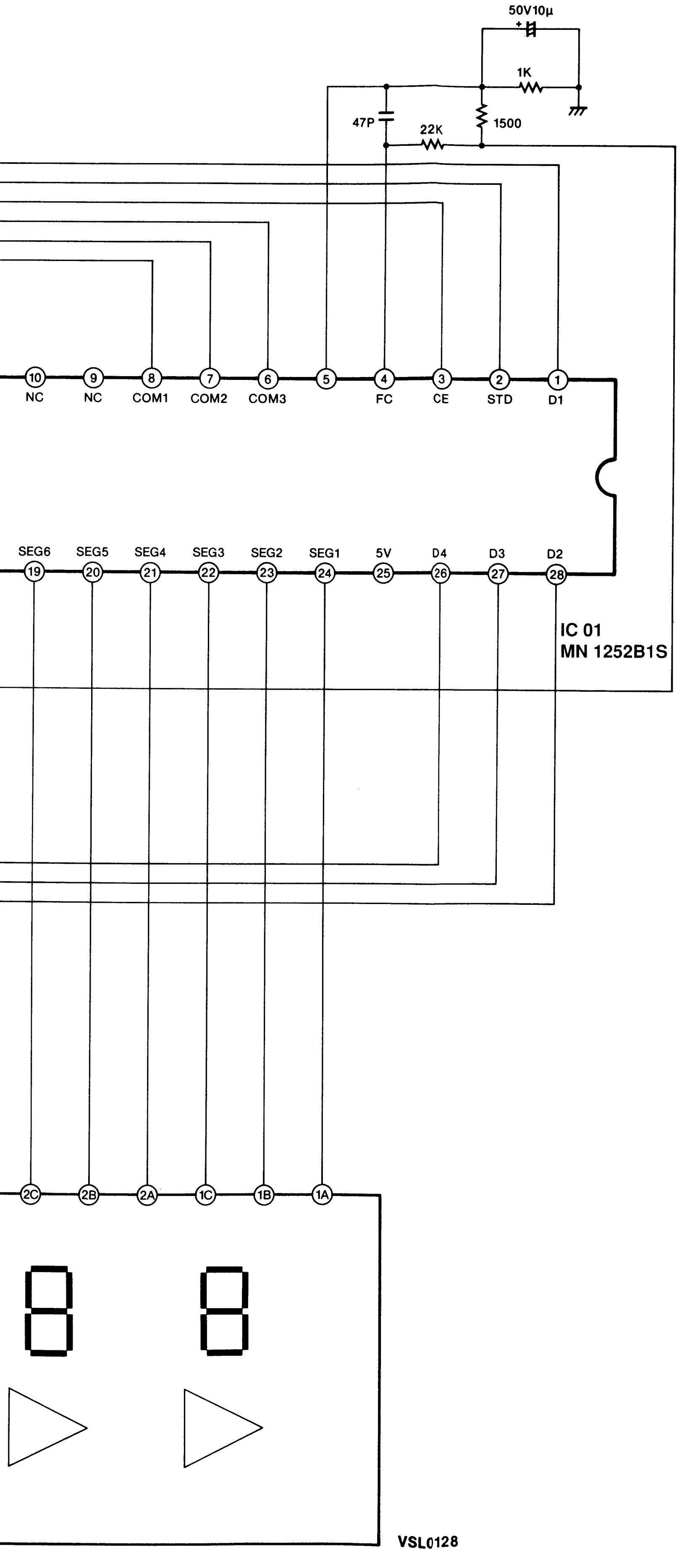
Hauptplatine / Main C.B.A.:

Netzteil / Power Supply	1000
Servoteil / Servo Section	2000
Video-Zusatzteil / Sub Video Section	3500
FM-Tonteil / FM Audio Section	4000
Systemst. / Systemcontrol Section	6000
VTR-Bedienteilplatine / VTR Operation C.B.A.	**01**
CCD-Sensorplatine / CCD Sensor C.B.A.	**200**
Prozeßplatine / Process C.B.A.	**300, 400, 500, 600**
AWT-Platine / AWT C.B.A.	**650**
Autofokus-Platine / Auto Focus C.B.A.	**700**
Sucherplatine / EVF C.B.A.	**800**
Start/Stop Anschlußplatine / S/S Connection C.B.A.	**1600**
Capstan-Treiberplatine / Capstan Drive C.B.A.	**2500**
Lumin.- und Farbteilplatine / Lumin. and Chrominance C.B.A.	**3000, 3100, 8000**
PCM Tonplatine / PCM Audio C.B.A.	**4500, 4600**
Mik.-Verstärkerplatine / Mic. Amp. C.B.A.	**4800**
Kopfverstärker-Platine / Head Amp. C.B.A.	**5000**
Buchsenplatine / Jack C.B.A.	**6500**
Kamera-Bedienteilplatine / Camera Operation C.B.A.	**6800**

Schaltbild des VTR-Bedienteiles
VTR Operation Schematic Diagram

Keine Einzelteile lieferbar, keine Platinendarstellung.
No spare parts available, no circuit board layout.


FF
SW01
SLOW
SW06
PAUSE
SW11
Hi8 AUTO/OFF
SW14
REW
SW02
PLAY
SW07
CMR/VTR
SW15
EJECT
SW03
INSERT
SW08
TIMER
SW16
STOP
SW04
(REC)
(SW09)
STAND BY
SW12
RESET
SW05
MEMORY
SW10
OSD ON/OFF
SW13
50V10μ
1K
47P
22K
1500
SEG11
SEG12
NC
SEG14
NC
NC
COM1
COM2
COM3
FC
CE
STD
D1
SEG10
SEG9
SEG8
SEG7
SEG6
SEG5
SEG4
SEG3
SEG2
SEG1
5V
D4
D3
D2
IC 01
MN 1252B1
PO1
P123
P122
P121
P120
P133
P30
P23
P22
P21
P20
REG5V
LCD STB
LCD CE
POWER SW Ⓛ
POWER ON 5V
POWER ON Ⓛ
HI8 LED
AUDIO LED
GND
PCM/FM SW
P130
P131
P132
GND
47K
47K
47K
47K
10K
47K
IC 02
MN 4050 BS
VS9
PO2
POWER SW
P130
P131
P132
P30
P121
P23
GND
POWER SW
SW18
PCM/FM SW
SW17
POWER LED
L3
Hi8 LED
L1
390
AUDIO LED
L2
390
C3
C2
C1
5B
5B
4C
4B
4A
3C
3B
3A
2C
2B
2A
1C
1B
1A
VSL0128


50V10µ
1K
47P
22K
1500
10 NC
9 NC
8 COM1
7 COM2
6 COM3
5
4 FC
3 CE
2 STD
1 D1
SEG6 19
SEG5 20
SEG4 21
SEG3 22
SEG2 23
SEG1 24
5V 25
D4 26
D3 27
D2 28
IC 01
MN 1252B1S
2C
2B
2A
1C
1B
1A
VSL0128

Spannungstabelle der VTR-Bedienteil-IC's
VTR Operation IC's Voltage Chart

REF. NO.	IC01																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0.6	0	0.1	3.4	0	3.6	3.6	3.6	3.6	3.6	0	3.5	3.6	3.6	3.6	3.6	3.6	3.6
STOP	0.6	0	0.6	3.5	2.1	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6

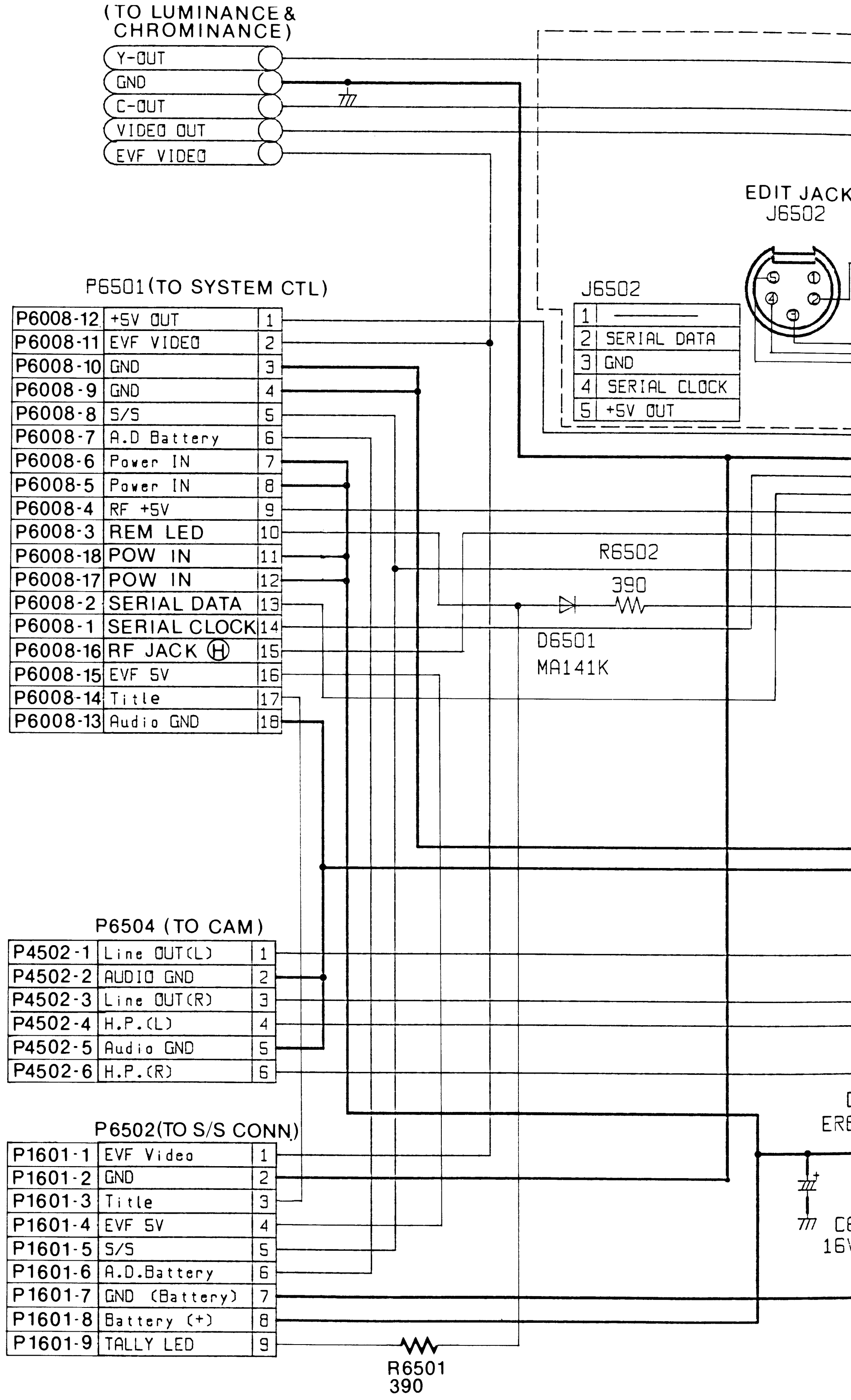
REF. NO.	IC01																	
MODE	19	20	21	22	23	24	25	26	27	28								
PLAY	3.6	3.6	3.5	3.6	3.6	3.6	5.0	0.6	0.6	0.6								
STOP	3.6	3.6	3.6	3.6	3.6	3.6	5.0	0.6	0.6	0.1								

REF. NO.	IC02																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
PLAY	5.0	0.6	0.6	0	0	0.1	0.1	0	0.9	0.5	0.6	0.3	0.6	0.6	0.6	0.6		
STOP	5.0	0.6	0.6	0	0	0.1	0.1	0	0.9	0.5	0.6	0.3	0.6	0.6	0.6	0.6		

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.

DC voltages tol. ± 15 % measured with digital voltmeter against GND.

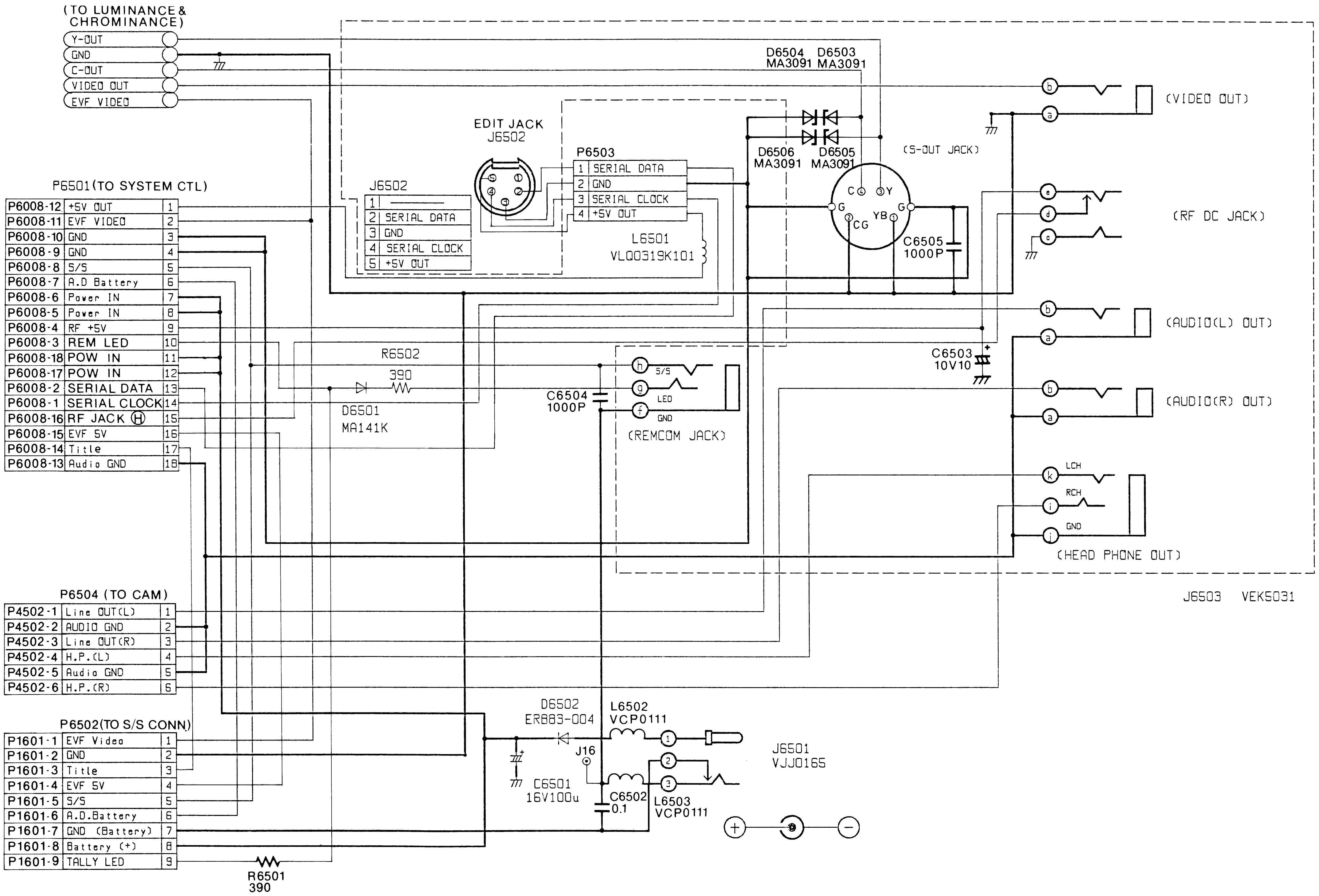
Schaltbild der Buchsenplatine
Jack Board Schematic Diagram


(TO LUMINANCE & CHROMINANCE)
Y-OUT
GND
C-OUT
VIDEO OUT
EVF VIDEO
EDIT JACK
J6502
P6501 (TO SYSTEM CTL)
P6008-12 +5V OUT 1
P6008-11 EVF VIDEO 2
P6008-10 GND 3
P6008-9 GND 4
P6008-8 S/S 5
P6008-7 A.D Battery 6
P6008-6 Power IN 7
P6008-5 Power IN 8
P6008-4 RF +5V 9
P6008-3 REM LED 10
P6008-18 POW IN 11
P6008-17 POW IN 12
P6008-2 SERIAL DATA 13
P6008-1 SERIAL CLOCK 14
P6008-16 RF JACK Ⓗ 15
P6008-15 EVF 5V 16
P6008-14 Title 17
P6008-13 Audio GND 18
J6502
1
2 SERIAL DATA
3 GND
4 SERIAL CLOCK
5 +5V OUT
R6502
390
D6501
MA141K
P6504 (TO CAM)
P4502-1 Line OUT(L) 1
P4502-2 AUDIO GND 2
P4502-3 Line OUT(R) 3
P4502-4 H.P.(L) 4
P4502-5 Audio GND 5
P4502-6 H.P.(R) 6
P6502 (TO S/S CONN)
P1601-1 EVF Video 1
P1601-2 GND 2
P1601-3 Title 3
P1601-4 EVF 5V 4
P1601-5 S/S 5
P1601-6 A.D.Battery 6
P1601-7 GND (Battery) 7
P1601-8 Battery (+) 8
P1601-9 TALLY LED 9
R6501
390

13	14	15	16	17	18
3.6	3.6	3.6	3.6	3.6	3.6
3.6	3.6	3.6	3.6	3.6	3.6

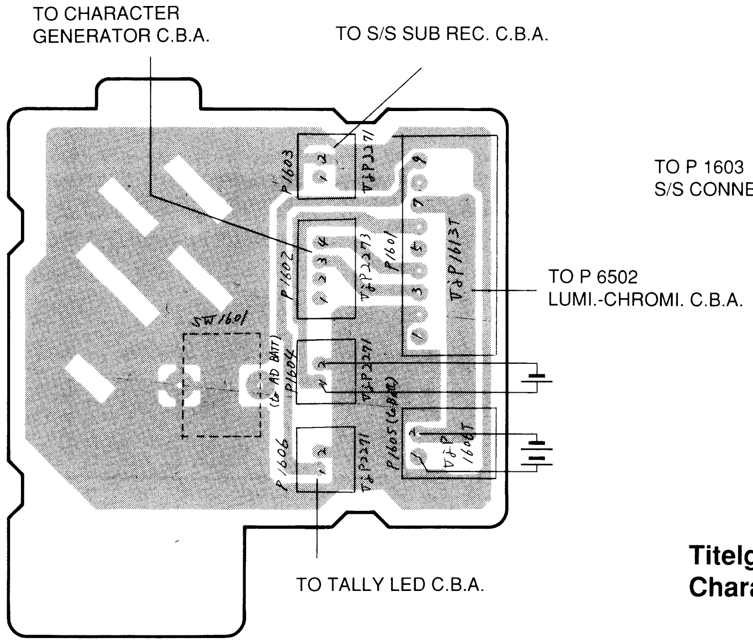
13	14	15	16		
0.6	0.6	0.6	0.6		
0.6	0.6	0.6	0.6		

Schaltbild der Buchsenplatine
Jack Board Schematic Diagram

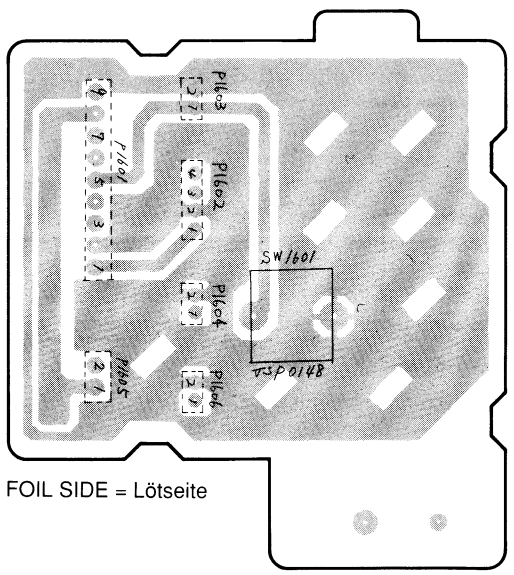

(TO LUMINANCE & CHROMINANCE)
Y-OUT
GND
C-OUT
VIDEO OUT
EVF VIDEO
P6501 (TO SYSTEM CTL)
P6008-12 +5V OUT 1
P6008-11 EVF VIDEO 2
P6008-10 GND 3
P6008-9 GND 4
P6008-8 S/S 5
P6008-7 A.D Battery 6
P6008-6 Power IN 7
P6008-5 Power IN 8
P6008-4 RF +5V 9
P6008-3 REM LED 10
P6008-18 POW IN 11
P6008-17 POW IN 12
P6008-2 SERIAL DATA 13
P6008-1 SERIAL CLOCK 14
P6008-16 RF JACK Ⓗ 15
P6008-15 EVF 5V 16
P6008-14 Title 17
P6008-13 Audio GND 18
EDIT JACK
J6502
J6502
1
2 SERIAL DATA
3 GND
4 SERIAL CLOCK
5 +5V OUT
P6503
1 SERIAL DATA
2 GND
3 SERIAL CLOCK
4 +5V OUT
L6501
VLQ0319K101
D6504 MA3091
D6503 MA3091
D6506 MA3091
D6505 MA3091
(S-OUT JACK)
C Y G G CG YB
C6505 1000P
(VIDEO OUT)
(RF DC JACK)
(AUDIO(L) OUT)
C6503 10V10
(AUDIO(R) OUT)
LCH
RCH
GND
(HEAD PHONE OUT)
J6503 VEK5031
R6502 390
D6501 MA141K
C6504 1000P
S/S
LED
GND
(REMCOM JACK)
P6504 (TO CAM)
P4502-1 Line OUT(L) 1
P4502-2 AUDIO GND 2
P4502-3 Line OUT(R) 3
P4502-4 H.P.(L) 4
P4502-5 Audio GND 5
P4502-6 H.P.(R) 6
P6502 (TO S/S CONN.)
P1601-1 EVF Video 1
P1601-2 GND 2
P1601-3 Title 3
P1601-4 EVF 5V 4
P1601-5 S/S 5
P1601-6 A.D.Battery 6
P1601-7 GND (Battery) 7
P1601-8 Battery (+) 8
P1601-9 TALLY LED 9
R6501 390
D6502 ERB83-004
J16
C6501 16V100u
L6502 VCP0111
C6502 0.1
L6503 VCP0111
J6501 VJJ0165
+
−

Darstellung der Luminanz-und Farbteilplatine auf den Ausschlagseiten 2-99 bis 2-101.
For the Luminance and Chrominance Board Diagram refer to the foil out page 2-99 to 2-101.

Start/Stop-Anschlußplatine
S/S Connection C.B.A.

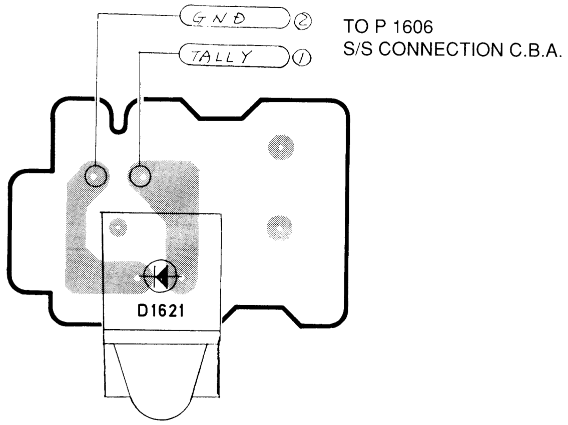

TO CHARACTER GENERATOR C.B.A.
TO S/S SUB REC. C.B.A.
TO P 6502 LUMI.-CHROMI. C.B.A.
TO TALLY LED C.B.A.
P1603
P1602
P1604
P1606
P1601
P1605
SW1601

COMPONENT SIDE = Bestückungsseite

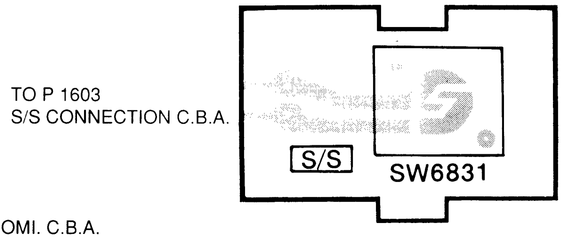

P1603
P1601
P1602
P1604
P1605
P1606
SW1601
TJSP0148

FOIL SIDE = Lötseite

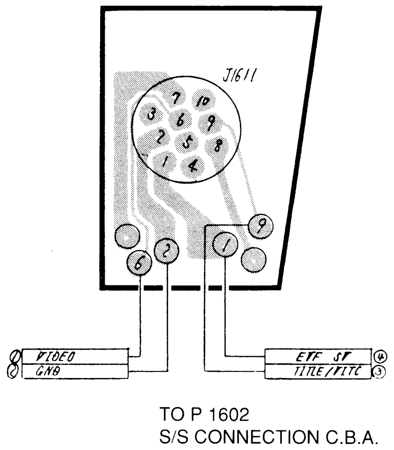
LED-Anzeigeplatine
Tally LED C.B.A.


GND
TALLY
②
①
TO P 1606
S/S CONNECTION C.B.A.
D1621

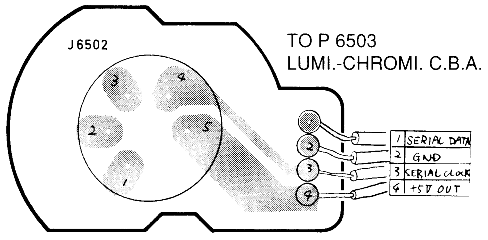
Start/Stop-Zusatzplatine
S/S Sub Rec. C.B.A.


TO P 1603
S/S CONNECTION C.B.A.
S/S
SW6831

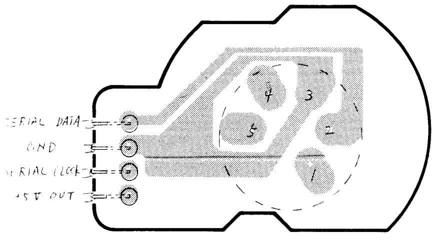
Titelgeneratorplatine
Character Generator C.B.A.


J1611
VIDEO
GND
EFF SW
TITLE/PITC
TO P 1602
S/S CONNECTION C.B.A.

Buchsenplatine
Jack Board C.B.A.

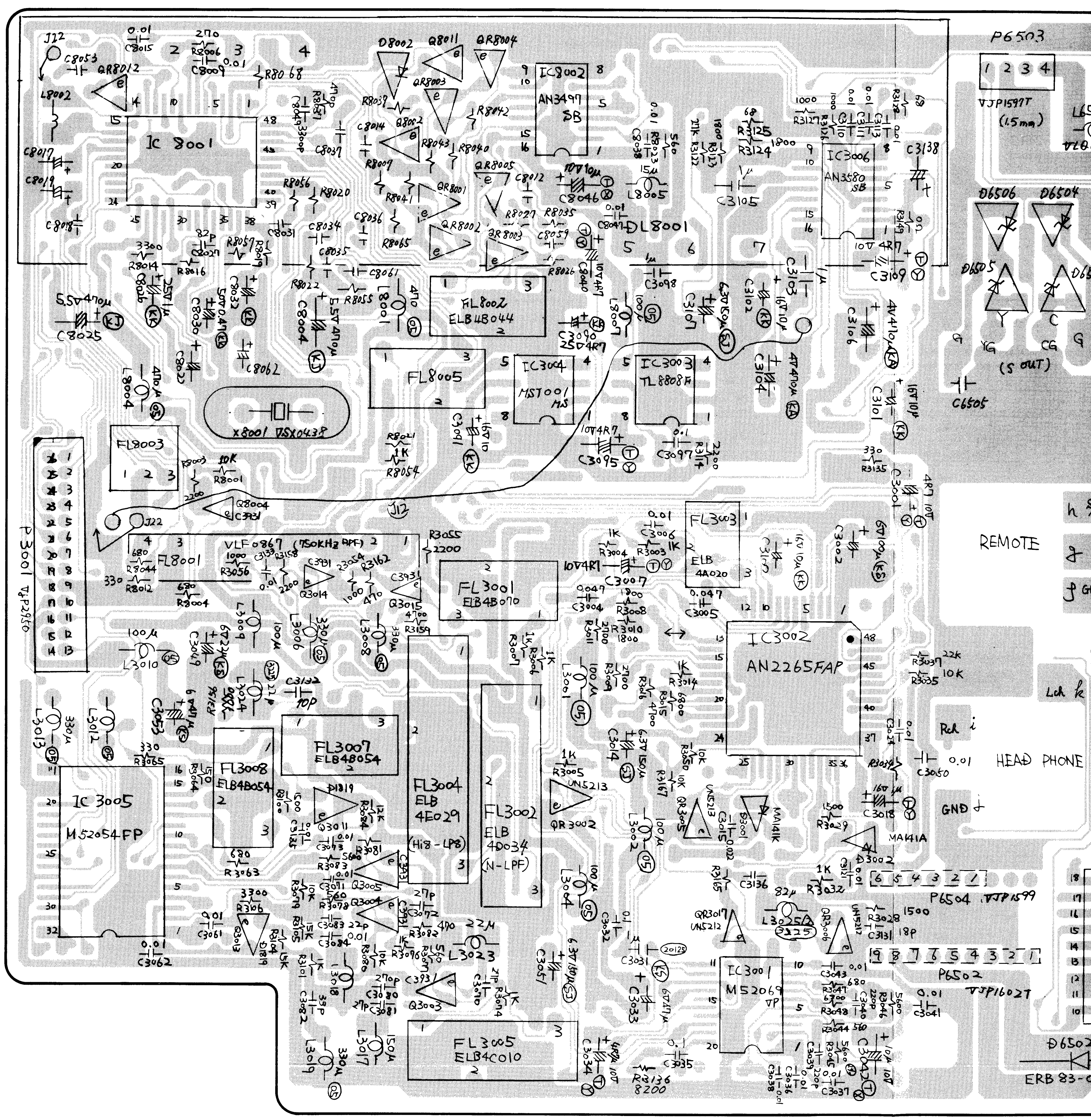

J6502
TO P 6503
LUMI.-CHROMI. C.B.A.
SERIAL DATA
GND
SERIAL CLOCK
+5V OUT

COMPONENT SIDE = Bestückungsseite


SERIAL DATA
GND
SERIAL CLOCK
+5V OUT

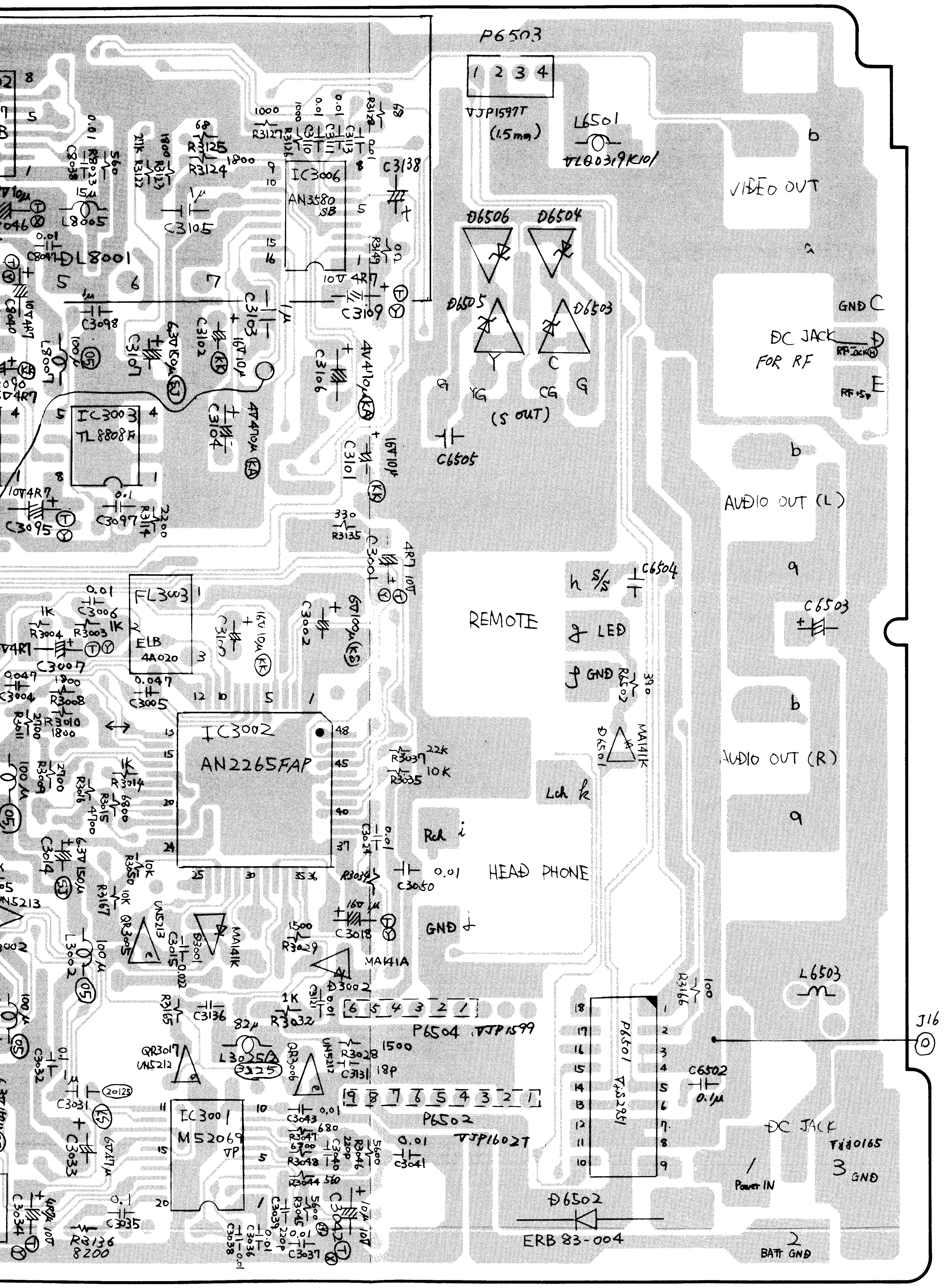
FOIL SIDE = Lötseite

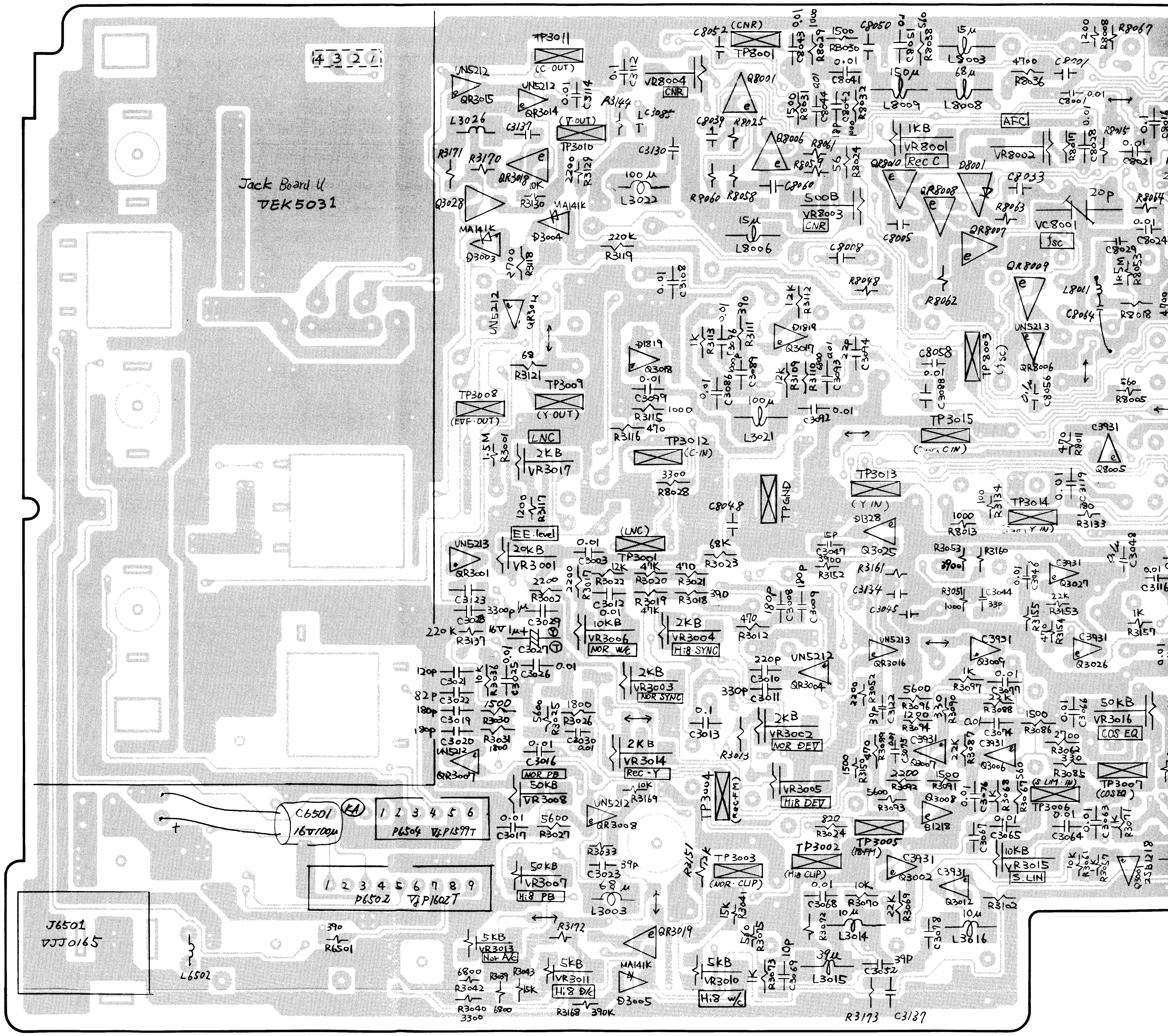
Luminanz- und Farbteilplatine
Luminance and Chrominance Pack C.B.A.


J12
IC8001
IC8002
AN3497
IC3006
AN3580
P6503
FL8002
ELB4B044
FL8005
IC3004
MS7001
IC3003
TL8808
X8001
FL8003
FL8001
FL3001
ELB4B070
FL3003
ELB 4A020
IC3002
AN2265FAP
IC3005
M52054FP
FL3008
ELB4B054
FL3007
ELB4B054
FL3004
ELB 4E029
FL3002
ELB 40034
FL3005
ELB4C010
IC3001
M52069
P3001
REMOTE
HEAD PHONE
GND
P6504
P6502
D6506
D6504
D6505
ERB 83-

COMPONENT SIDE = Bestückungsseite

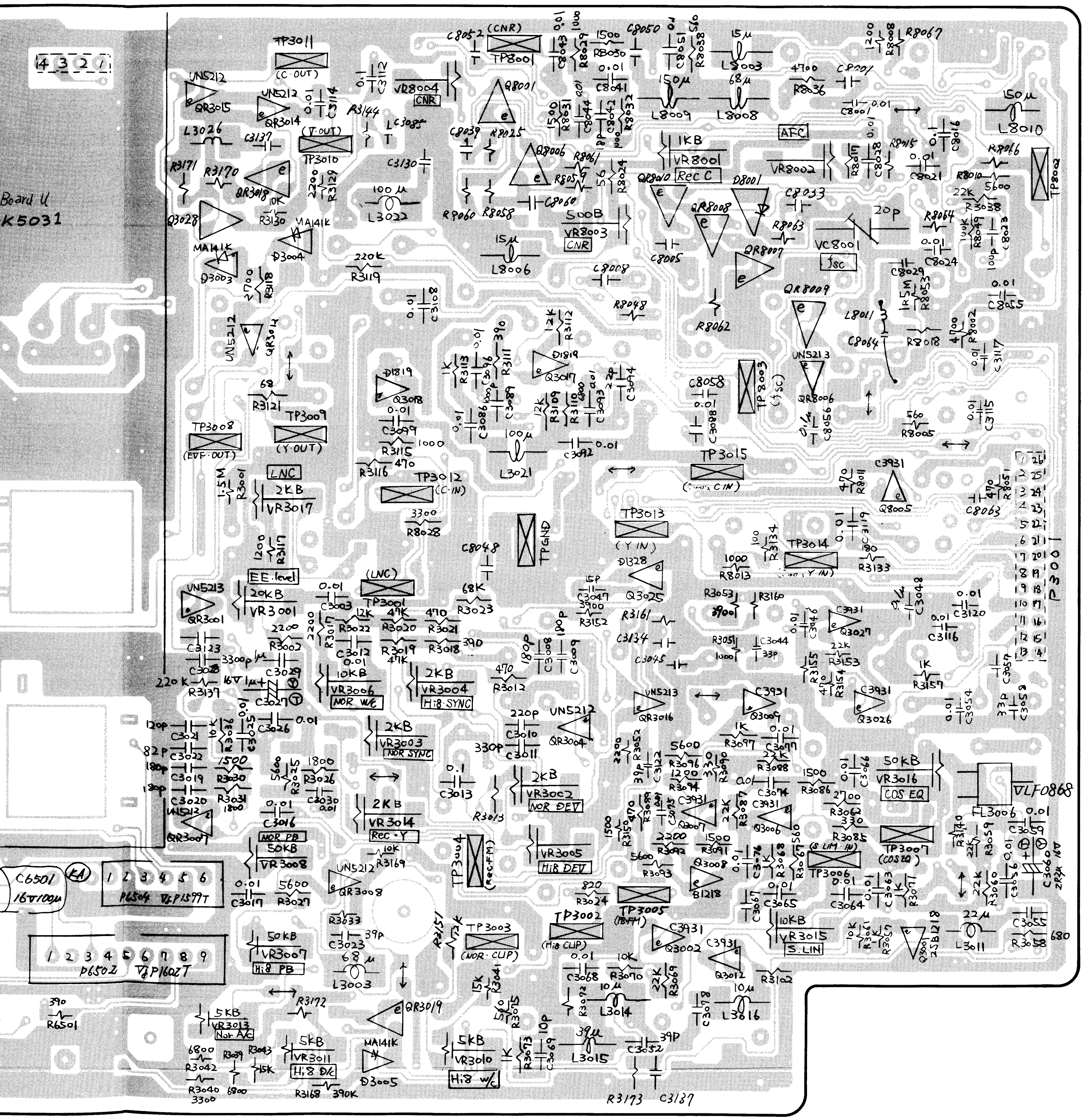
Luminanz- und Farbteilplatine
Luminance and Chrominance Pack C.B.A.


P6503
VJP1597T (1.5mm)
L6501
VLQ0319K101
VIDEO OUT
D6506
D6504
D6505
D6503
YG
CG
(S OUT)
GND
DC JACK FOR RF
AUDIO OUT (L)
AUDIO OUT (R)
REMOTE
LED
HEAD PHONE
IC3006
AN3580SB
IC3003
TL8808F
IC3002
AN2265FAP
IC3001
M52069FP
FL3003
ELB 4A020
DL8001
L8005
P6504 VJP1599
P6502 VJP1602T
P6501
D6502
ERB 83-004
L6503
J16
DC JACK
VJJ0165
Power IN
GND
BATT GND
MA141K
MA141A
UN5213
UN5212


Jack Board U
VEK5031
J6501
VJJ0165
L6502
C6501 16V/100μ
P6504 VJP1599T
P6502 VJP1602T
R6501
TP3011 (C OUT)
VR8004 CNR
TP8001
C8052 (CNR)
AFC
VR8001 Rec C
VR8002
VR8003 CNR
VC8001 fsc
TP8003 (fsc)
TP3010 (Y OUT)
TP3009 (Y OUT)
TP3008 (EVF OUT)
LNC
VR3017
TP3012 (C IN)
TP3015 (C IN)
TP3013 (Y IN)
TP3014 (Y IN)
TP GND
EE level
VR3001
TP3001 (LNC)
VR3006 NOR W/E
VR3004 Hi8 SYNC
VR3003 NOR SYNC
VR3002 NOR DEV
VR3014 Rec Y
VR3005 HiB DEV
NOR PB
VR3008
VR3007 Hi8 PB
VR3013 Nor A/C
VR3011 Hi8 B/C
VR3010 Hi8 W/C
TP3004 (Rec FM)
TP3003 (NOR CLIP)
TP3002 (Hi8 CLIP)
TP3005 (FM)
VR3016 COS EQ
TP3007 (COS EQ)
TP3006 (S LIM IN)
VR3015 S.LIN
L3003
L3014
L3015
L3016
L3021
L3022
L3026
L8003
L8006
L8008
L8009
L8011
UN5212
UN5213
MA141K

FOIL SIDE = Lötseite

Luminanz- und Farbteilplatine
Luminance and Chrominance Pack C.B.A.


TP3011
(C-OUT)
UN5212
QR3015
QR3014
L3026
TP3010
(Y-OUT)
QR3018
Q3028
MA141K
D3004
D3003
R3119
VR8004
CNR
C8052 (CNR)
TP8001
Q8001
Q8006
VR8001
Rec C
Q8010
Q8008
Q8007
L8009
L8008
L8003
L8010
AFC
VR8002
VC8001
fsc
S00B
VR8003
CNR
L8006
TP8002
L8011
QR8009
UN5213
QR8006
TP8003 (fsc)
D1819
Q3018
D1919
Q3017
TP3009
(Y-OUT)
TP3008
(EVF-OUT)
LNC
2KB
VR3017
TP3012
(C-IN)
L3021
TP3015
(C-IN)
C3931
Q8005
TP3013
(Y IN)
D1328
Q3025
TP GND
TP3014
EE level
20KB
VR3001
UN5213
QR3001
(LNC)
TP3001
R3023
R3018
R3019
Q3027
Q3026
10KB
VR3006
NOR W/E
2KB
VR3004
Hi8 SYNC
UN5213
QR3016
Q3009
2KB
VR3003
NOR SYNC
UN5212
Q3004
2KB
VR3002
NOR DEV
50KB
VR3016
COS EQ
VLF0868
L3006
2KB
VR3014
Rec-Y
NOR PB
50KB
VR3008
UN5212
QR3008
TP3004 (Rec-FM)
VR3005
Hi8 DEV
TP3006 (S.LIM IN)
TP3007 (COS EQ)
Q3008
B1218
C6501 16V100μ
P6504 VGP1599T
1 2 3 4 5 6
50KB
VR3007
Hi8 PB
L3003
TP3005 (B.FM)
TP3002 (Hi8 CLIP)
TP3003 (NOR-CLIP)
Q3002
Q3012
10KB
VR3015
S.LIN
2SB1218
L3011
1 2 3 4 5 6 7 8 9
P6502 VGP1602T
QR3019
5KB
VR3013
Nor A/C
5KB
VR3011
Hi8 A/C
MA141K
D3005
5KB
VR3010
Hi8 W/E
L3014
L3015
L3016
R3173
C3187
Board U
K5031
4 3 2 1
R6501

Spannungstabelle des Luminanz- und Farbteiles
Luminance and Chrominance Voltage Chart

REF. NO.	IC3001																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	1.7	0	0	3.2	4.0	3.0	3.0	3.0	3.0	0	0	2.2	4.9	3.0	0	4.8	0	4.8
REC	1.7	0	1.9	3.2	3.9	3.0	3.0	3.0	2.8	2.8	2.2	0.5	2.3	4.9	3.0	2.1	0	0

REF. NO.	IC3001																	
MODE	19	20																
PLAY	0	0.1																
REC	0	2.0																

REF. NO.	IC3002																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	3.1	2.1	2.0	2.7	2.7	2.2	2.2	2.2	2.4	2.8	0	1.5	2.0	0	2.0	4.9	4.9
REC	0	2.9	2.3	2.0	2.7	2.7	2.2	2.2	2.0	2.2	2.8	1.7	1.0	2.0	0	2.0	4.8	2.1

REF. NO.	IC3002																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PLAY	4.8	4.8	4.8	3.4	0	4.9	3.8	0	2.4	2.7	2.9	2.9	2.5	0.9	2.8	4.9	1.3	3.6
REC	2.1	2.1	2.1	3.4	0	4.9	3.3	0	2.4	0	2.9	0	0	0	2.8	0	0	0

REF. NO.	IC3002																	
MODE	37	38	39	40	41	42	43	44	45	46	47	48						
PLAY	0	1.3	2.0	2.4	3.2	0	2.5	0	2.6	0.4	0	3.4						
REC	0	4.3	0	0	3.1	0	2.5	0	2.5	0.4	2.1	2.9						

REF. NO.	IC3003									IC3004								
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	
PLAY	0	0	4.7	3.3	1.5	2.5	2.4	9.7		1.5	0	0	2.9	3.0	4.7	3.4	0	
REC	0	0	0	0	0.1	0	0	7.5		0	0.3	0	0	0	0	0	0	

REF. NO.	IC3005																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	4.1	2.5	0	0	1.9	1.9	0	1.4	2.9	2.5	5.0	0	2.5	0	0	2.9	4.1	0
REC	0	0	0	0	0	0	0	0	0	0	5.0	0	0	0	0	0	0	0

REF. NO.	IC3005																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32				
PLAY	0	4.8	2.4	4.8	1.7	2.6	3.9	0	0	2.6	2.0	0	2.4	2.5				
REC	0	0	0	0	0	0.2	0	0.1	0	0	0	0.1	0	0				

REF. NO.	IC3006																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
PLAY	1.0	0	1.0	0	2.0	0.5	2.0	2.0	5.0	1.0	1.0	0	1.0	1.0	2.0	0.5		
REC	1.0	5.0	1.0	0	2.0	0.8	2.0	2.0	4.8	0	1.8	0	1.2	1.0	2.5	0.8		

REF. NO.	IC8001																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	2.2	0	4.2	2.0	3.0	3.0	0	2.0	0	0	2.8	3.0	3.0	2.0	0	0	0	2.8
REC	2.0	0	4.8	2.0	3.0	3.0	0	2.5	5.0	3.0	5.0	2.0	3.0	2.0	0	0	0	2.5

REF. NO.	IC8001																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PLAY	0	0	3.0	3.0	3.0	3.0	3.0	4.8	3.2	3.2	2.0	3.0	2.5	2.0	2.0	4.0	0	0.8
REC	0	0	4.5	0	1.0	3.0	2.0	4.5	3.0	0	0	2.0	0	0	2.0	4.0	0	0.5

REF. NO	IC8001																	
MODE	37	38	39	40	41	42	43	44	45	46	47	48						
PLAY	2.5	2.2	2.0	2.0	0	3.0	0	2.5	3.0	2.5	0	4.0						
REC	4.0	3.0	0	2.0	0	3.0	0	2.5	3.0	2.5	3.0	4.0						

REF. NO.	IC8002																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
PLAY	1.8	0	2.2	2.2	2.2	2.0	1.5	0	1.8	3.0	3.0	0	2.5	0	3.0	5.0		
REC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

REF. NO.	Q3001			Q3002			Q3004			Q3005			Q3006			Q3007		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	3.0	0	2.4	0.7	4.8	1.4	1.5	3.3	2.0	0.7	4.0	1.5	1.2	4.8	2	1.3	3.0	2.0
REC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

REF. NO	Q3008			Q3011			Q3012			Q3013			Q3017			Q3018		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	1.8	0	1.3	0	4.9	1.8	2.3	2.5	3.0	1.8	4.8	2.4	2.0	4.7	2.7	2.8	4.7	3.4
REC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

REF. NO.	Q3021			QR3001			QR3002			QR3004			QR3005			QR3006		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	4.1	0	0	0.1	0	0	3.7	0	0	0.3	0	0	0	3.7	0	0	0
REC	1.7	4.9	2.4	0	0	0	0	3.7	0	0	1.2	0	0	0	3.7	0	0	3.7

REF. NO.	QR3007			QR3008			QR3012			QR3014			QR3015			QR3017		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0.6	0	0	0.5	0	0	0.9	0	0	0	3.3	0	2.4	0	0	1.4	0
REC	0	1.3	0	0	0	0	0	0.9	0	0	0	0	0	0	4.8	0	0	3.7

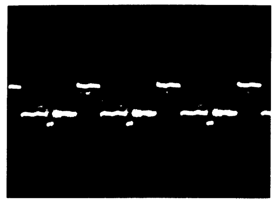
REF. NO.	Q8001			Q8002			Q8003			QR8001			QR8002			QR8003		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.6	0	0	0	4.5	0	1.0	3.0	2.0	0	0	0	0	0	4.5	0	0	2.5
REC	0	0	0	0	4.5	0	1.0	3.5	2.0	0	0	0	0	0	4.8	0	0	2.5

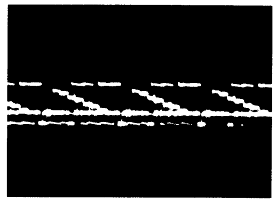
REF. NO.	QR8004			QR8005														
MODE	E	C	B	E	C	B												
PLAY	0	1.5	0	0	0	0												
REC	0	2.5	0	0	0	1.0												

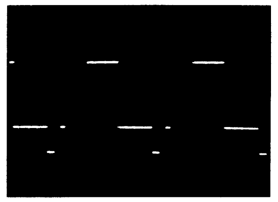
Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.

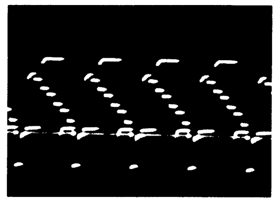
DC voltages tol. ± 15 % measured with digital voltmeter against GND.

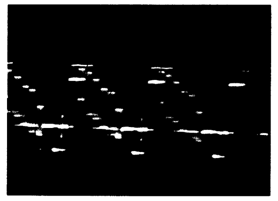
Oszillogramme des Luminanz-und Farbteiles
Luminance and Chrominance Circuit Waveforms

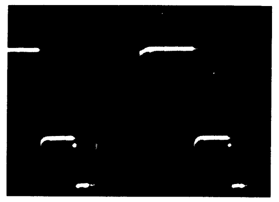

TP3002 REC
0.1V/20μsec. div.

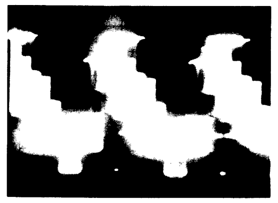

TP3003 REC
0.1V/20μsec. div.

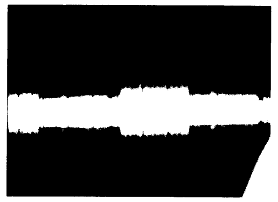

TP3009 REC
0.5V/0.1msec. div.

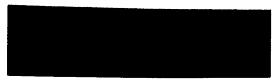

TP3009 PLAY
0.5V/10μsec. div.

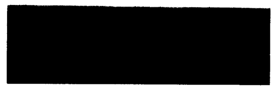

TP3010 REC
0.5V/0.1msec. div.


TP3010 PLAY
0.2V/5μsec. div.

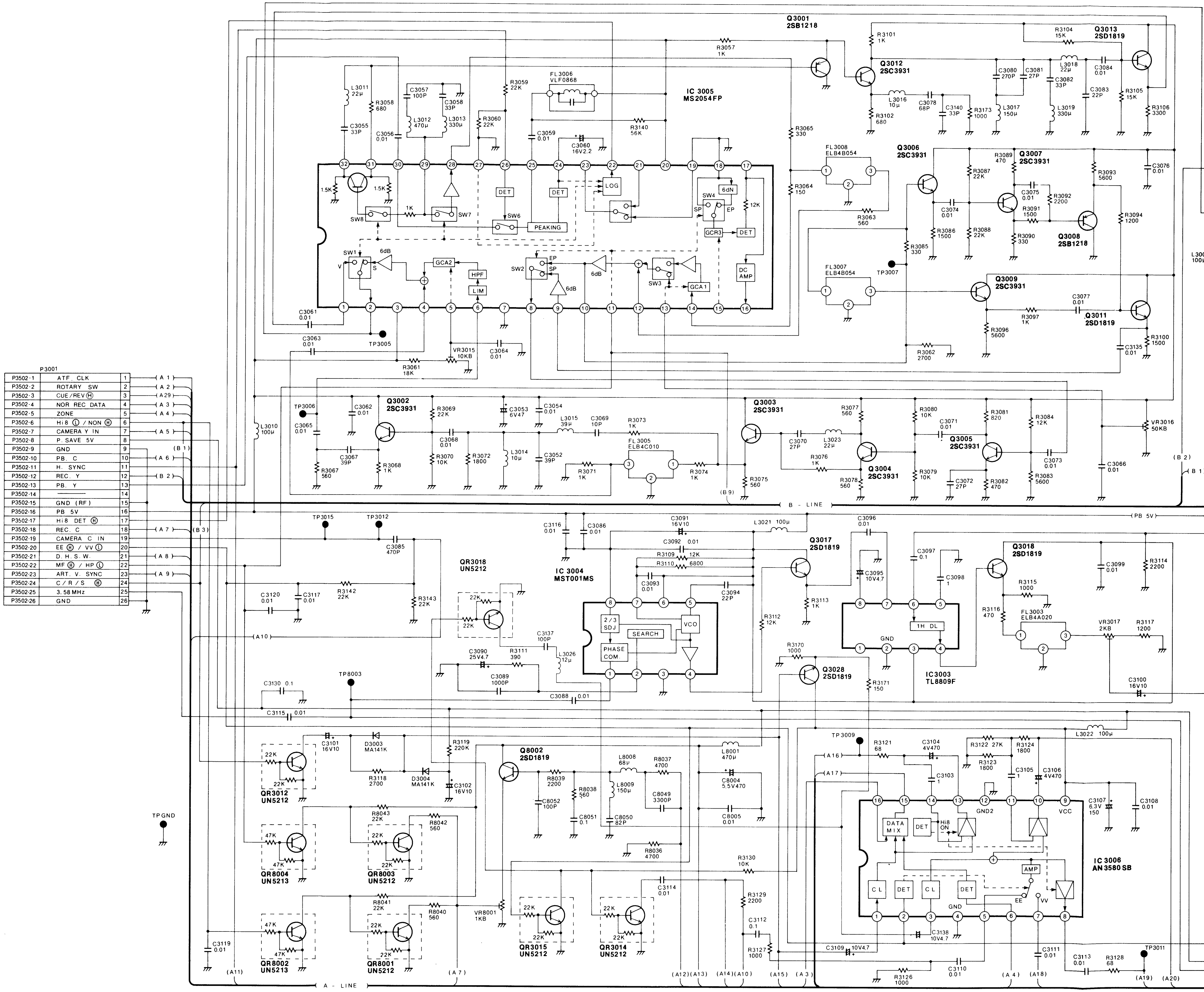

TP3013 REC
0.1V/0.1msec. div.


TP8001 PLAY
0.2V/2msec. div.

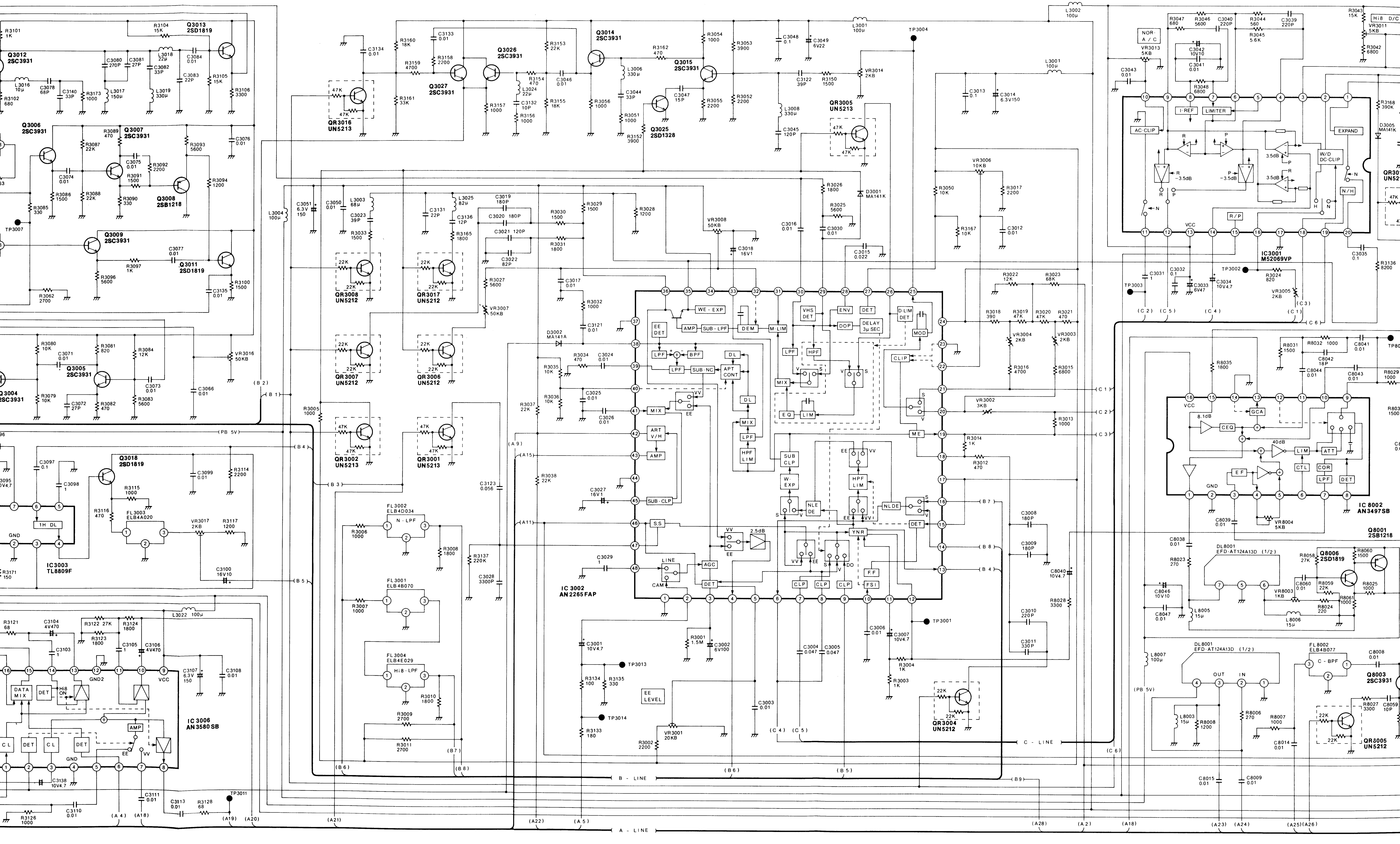

TP8002 REC
0.1V/0.1msec. div.


TP8003 PLAY
0.1V/0.2msec. div.

Schaltbild des Luminanz-und Farbteiles
Luminance and Chrominance Schematic Diagram

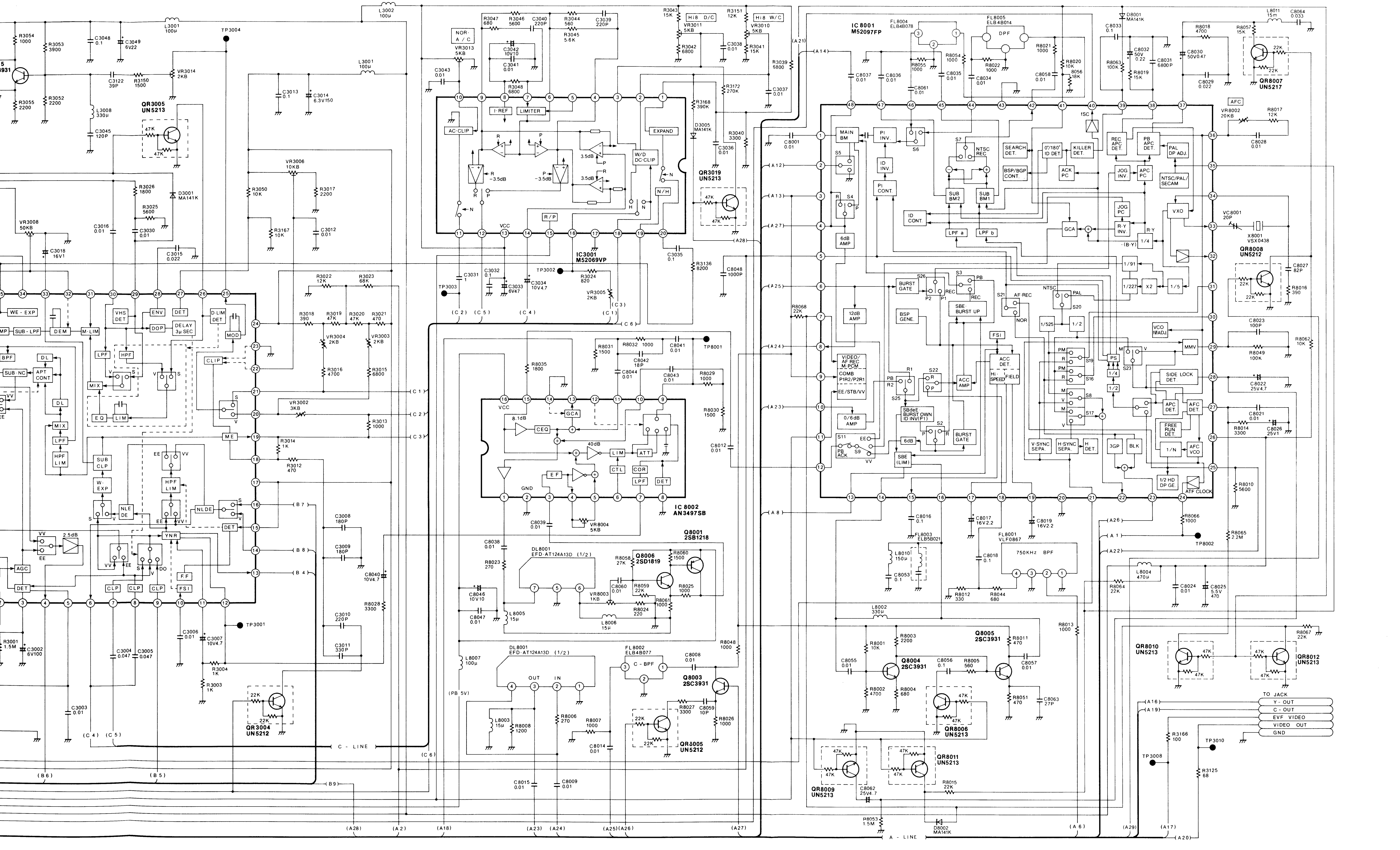

IC 3005
MS2054FP
IC 3004
MST001MS
IC3003
TL8809F
IC 3006
AN3580SB
Q3001
2SB1218
Q3012
2SC3931
Q3013
2SD1819
Q3006
2SC3931
Q3007
2SC3931
Q3008
2SB1218
Q3009
2SC3931
Q3011
2SD1819
Q3002
2SC3931
Q3003
2SC3931
Q3004
2SC3931
Q3005
2SC3931
Q3017
2SD1819
Q3018
2SD1819
Q3028
2SD1819
Q8002
2SD1819
QR3018
UN5212
QR3012
UN5212
QR8004
UN5213
QR8003
UN5212
QR8002
UN5213
QR8001
UN5212
QR3015
UN5212
QR3014
UN5212
FL3006
VLF0868
FL3008
ELB4B054
FL3007
ELB4B054
FL3005
ELB4C010
FL3003
ELB4A020
D3003
MA141K
D3004
MA141K
VR3015
10KB
VR3016
50KB
VR3017
2KB
VR8001
1KB
TP3005
TP3006
TP3007
TP3009
TP3011
TP3012
TP3015
TP8003
TPGND
B - LINE
A - LINE
(PB 5V)
SW1
SW2
SW3
SW4
SW6
SW7
SW8
DET
PEAKING
LOG
GCA1
GCA2
GCR3
HPF
LIM
DC AMP
6dB
2/3 SDJ
SEARCH
VCO
PHASE COM
1H DL
DATA MIX
Hi8 ON
CL
AMP
GND2
VCC
EE
VV
P3001

P3502-1	ATF. CLK	1
P3502-2	ROTARY SW	2
P3502-3	CUE/REV Ⓗ	3
P3502-4	NOR REC DATA	4
P3502-5	ZONE	5
P3502-6	Hi8 Ⓛ / NON Ⓗ	6
P3502-7	CAMERA Y IN	7
P3502-8	P. SAVE 5V	8
P3502-9	GND	9
P3502-10	PB. C	10
P3502-11	H. SYNC	11
P3502-12	REC. Y	12
P3502-13	PB. Y	13
P3502-14	———	14
P3502-15	GND (RF)	15
P3502-16	PB 5V	16
P3502-17	Hi8 DET Ⓗ	17
P3502-18	REC. C	18
P3502-19	CAMERA C IN	19
P3502-20	EE Ⓗ / VV Ⓛ	20
P3502-21	D. H. S. W.	21
P3502-22	MF Ⓗ / HP Ⓛ	22
P3502-23	ART. V. SYNC	23
P3502-24	C/R/S Ⓗ	24
P3502-25	3.58MHz	25
P3502-26	GND	26



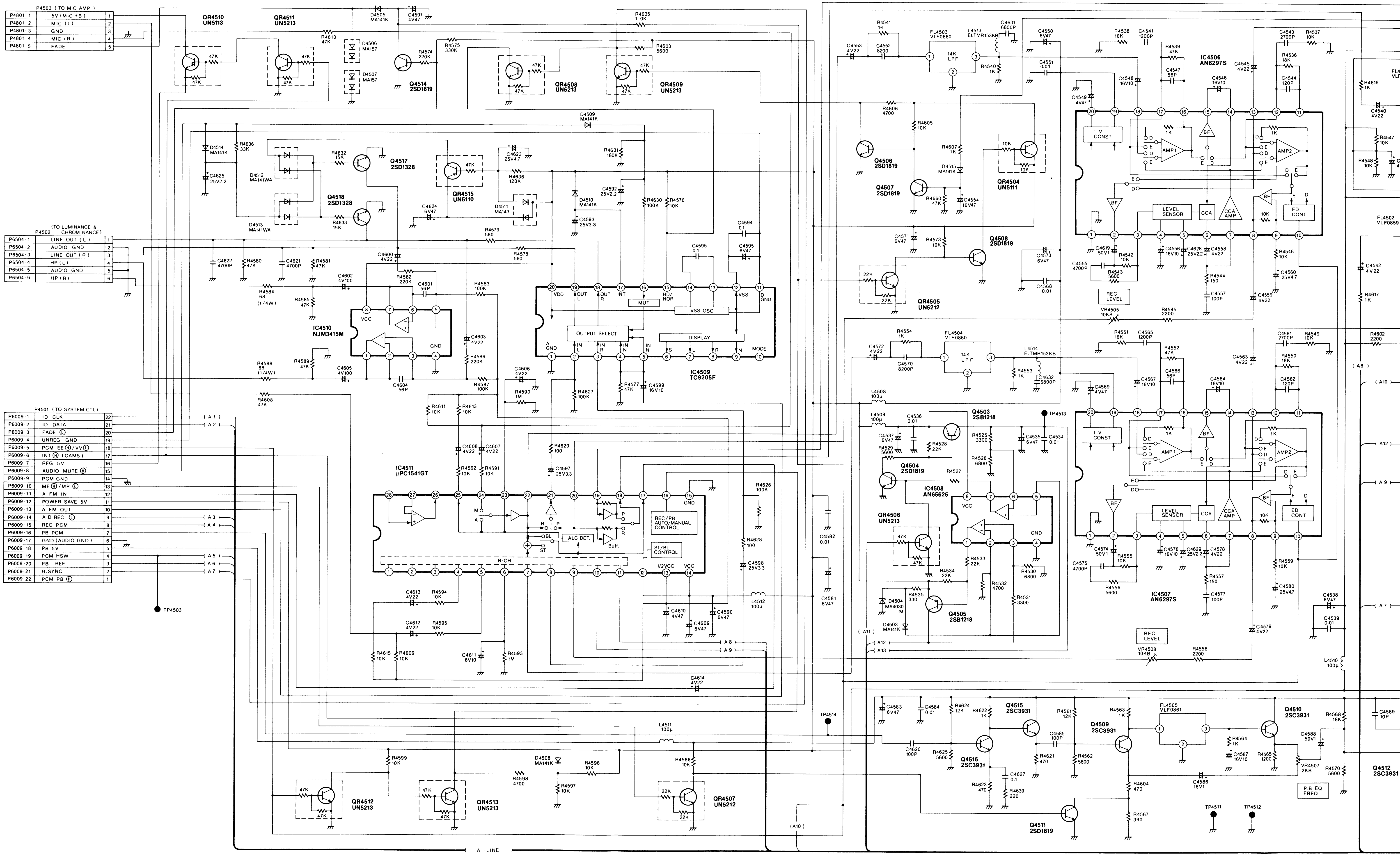
IC 3002
AN2265FAP
IC3001
M52069VP
IC 8002
AN3497SB
IC3003
TL8809F
IC 3006
AN3580SB
Q3012
2SC3931
Q3013
2SD1819
Q3006
2SC3931
Q3007
2SC3931
Q3008
2SB1218
Q3009
2SC3931
Q3011
2SD1819
Q3005
2SC3931
Q3004
2SC3931
Q3018
2SD1819
QR3016
UN5213
Q3027
2SC3931
Q3026
2SC3931
Q3014
2SC3931
Q3015
2SC3931
Q3025
2SD1328
QR3005
UN5213
QR3008
UN5212
QR3017
UN5212
QR3007
UN5212
QR3006
UN5212
QR3002
UN5213
QR3001
UN5213
QR3004
UN5212
Q8001
2SB1218
Q8006
2SD1819
Q8003
2SC3931
QR8005
UN5212
D3001
MA141K
D3002
MA141A
D3005
MA141K
FL3002
ELB4D034
N-LPF
FL3001
ELB4B070
FL3004
ELB4E029
Hi8-LPF
FL3003
ELB4A020
FL8002
ELB4B077
C-BPF
DL8001
EFD-AT124A13D (1/2)
TP3001
TP3002
TP3003
TP3004
TP3007
TP3011
TP3013
TP3014
EE LEVEL
WE-EXP
AMP
SUB-LPF
DEM
M-LIM
VHS DET
ENV
DET
DOP
DELAY 3μ SEC
D-LIM DET
MOD
CLIP
EE DET
LPF
BPF
SUB-NC
APT CONT
DL
MIX
EQ
LIM
HPF
ART V/H
SUB-CLP
SUB CLP
W EXP
HPF LIM
NLE DE
NLDE
S.S
VV
2.5dB
LINE
CAM
AGC
YNR
F.F
FSI
CLP
ME
NOR·A/C
I·REF
LIMITER
AC·CLIP
EXPAND
W/D DC·CLIP
N/H
R/P
VCC
GND
GND2
CEQ
GCA
ATT
CTL
COR
EF
8.1dB
40dB
DATA MIX
Hi8 ON
1H DL
C-LINE
B-LINE
A-LINE
PB 5V

Schaltbild des Luminanz-und Farbteiles
Luminance and Chrominance Schematic Diagram

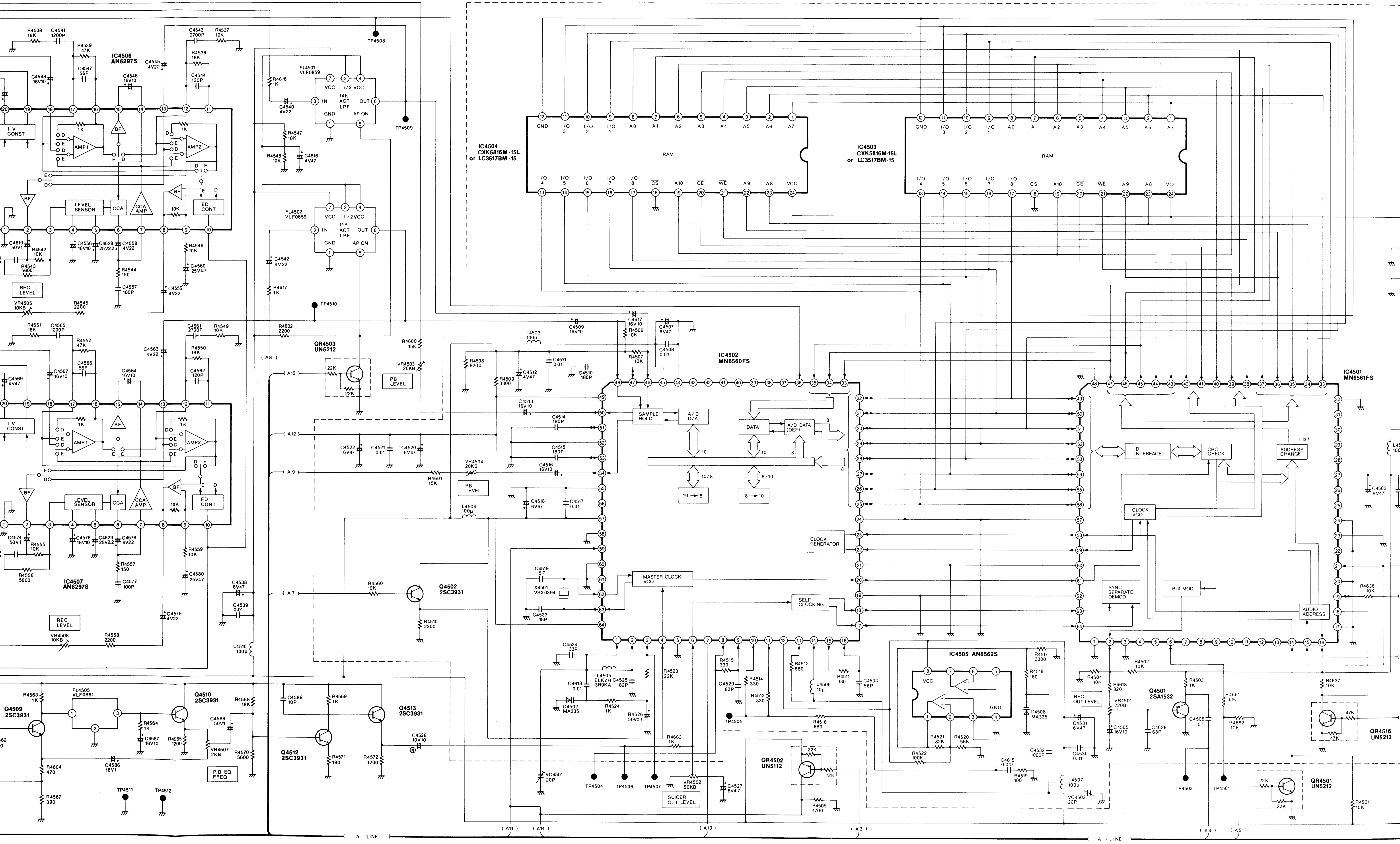

IC3001
M52069VP
IC 8001
M52097FP
IC 8002
AN3497SB
QR3005
UN5213
QR3019
UN5213
QR3004
UN5212
Q8001
2SB1218
Q8006
2SD1819
Q8003
2SC3931
Q8004
2SC3931
Q8005
2SC3931
QR8005
UN5212
QR8006
UN5213
QR8007
UN5217
QR8008
UN5212
QR8009
UN5213
QR8010
UN5213
QR8011
UN5213
QR8012
UN5213
DL8001
EFD-AT124A13D (1/2)
FL8001
VLF0867
750KHz BPF
FL8002
ELB4B077
C-BPF
FL8003
ELB5B021
FL8004
ELB4B078
FL8005
ELB4B014
DPF
X8001
VSX0438
C - LINE
A - LINE
TO JACK
Y - OUT
C - OUT
EVF VIDEO
VIDEO OUT
GND
TP3001
TP3002
TP3003
TP3004
TP3008
TP3010
TP8001
TP8002

Darstellung der Luminanz-und Farbteilplatine auf den Ausschlagseiten 2-99 bis 2-101.
For the Luminance and Chrominance Board Diagram refer to the foil out page 2-99 to 2-101.

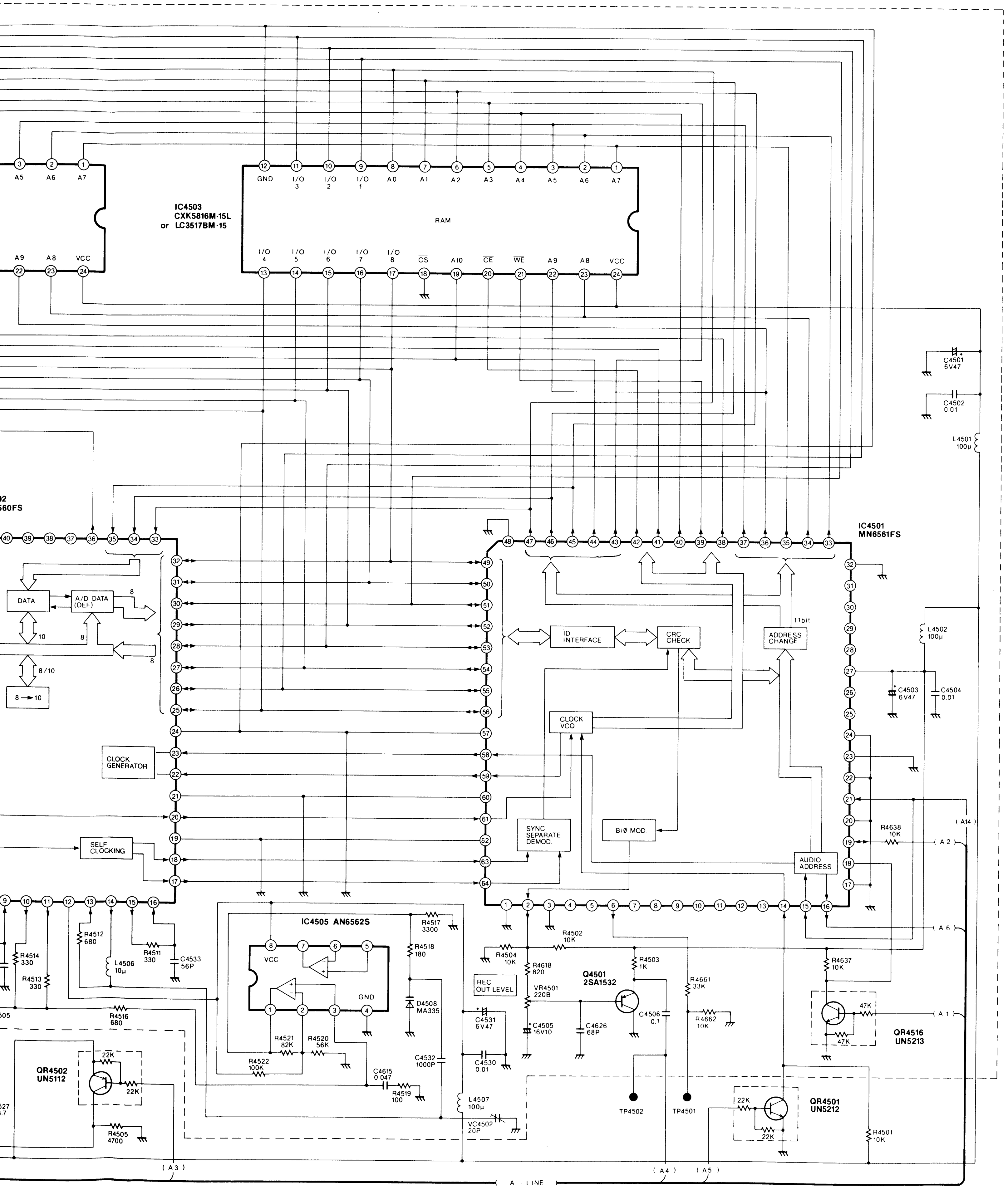
Schaltbild des PCM-Tonteiles
PCM Audio Schematic Diagram


P4503 (TO MIC AMP)
P4801-1 5V (MIC +B) 1
P4801-2 MIC (L) 2
P4801-3 GND 3
P4801-4 MIC (R) 4
P4801-5 FADE 5
(TO LUMINANCE & CHROMINANCE)
P4502
P6504-1 LINE OUT (L) 1
P6504-2 AUDIO GND 2
P6504-3 LINE OUT (R) 3
P6504-4 HP (L) 4
P6504-5 AUDIO GND 5
P6504-6 HP (R) 6
P4501 (TO SYSTEM CTL)
P6009-1 ID CLK 22
P6009-2 ID DATA 21
P6009-3 FADE Ⓛ 20
P6009-4 UNREG GND 19
P6009-5 PCM EEⒽ/VVⓁ 18
P6009-6 INT Ⓗ (CAMS) 17
P6009-7 REG 5V 16
P6009-8 AUDIO MUTE Ⓗ 15
P6009-9 PCM GND 14
P6009-10 MEⒽ/MPⓁ 13
P6009-11 A-FM IN 12
P6009-12 POWER SAVE 5V 11
P6009-13 A-FM OUT 10
P6009-14 A.D-REC Ⓛ 9
P6009-15 REC PCM 8
P6009-16 PB PCM 7
P6009-17 GND (AUDIO GND) 6
P6009-18 PB 5V 5
P6009-19 PCM HSW 4
P6009-20 PB REF 3
P6009-21 H.SYNC 2
P6009-22 PCM PB Ⓗ 1
TP4503
QR4510 UN5113
QR4511 UN5213
Q4514 2SD1819
QR4508 UN5213
QR4509 UN5213
Q4517 2SD1328
Q4518 2SD1328
QR4515 UN5110
IC4510 NJM3415M
IC4509 TC9205F
OUTPUT SELECT
DISPLAY
MUT
VSS OSC
IC4511 μPC1541GT
REC/PB AUTO/MANUAL CONTROL
ST/BL CONTROL
ALC DET.
R CH
QR4512 UN5213
QR4513 UN5213
QR4507 UN5212
A - LINE
TP4514
FL4503 VLF0860
14K LPF
L4513 ELTMR153KB
Q4506 2SD1819
Q4507 2SD1819
QR4504 UN5111
Q4508 2SD1819
QR4505 UN5212
IC4506 AN6297S
I V CONST
AMP1
AMP2
BF
LEVEL SENSOR
CCA
CCA AMP
ED CONT
REC LEVEL
VR4505 10KB
FL4504 VLF0860
L4514 ELTMR153KB
Q4503 2SB1218
TP4513
Q4504 2SD1819
IC4508 AN65625
QR4506 UN5213
Q4505 2SB1218
D4504 MA4030M
D4503 MA141K
IC4507 AN6297S
VR4508 10KB
Q4515 2SC3931
Q4516 2SC3931
Q4509 2SC3931
FL4505 VLF0861
Q4510 2SC3931
Q4511 2SD1819
VR4507 2KB
P B EQ FREQ
TP4511
TP4512
Q4512 2SC3931
FL4502 VLF0859
(A1) (A2) (A3) (A4) (A5) (A6) (A7) (A8) (A9) (A10) (A11) (A12) (A13)

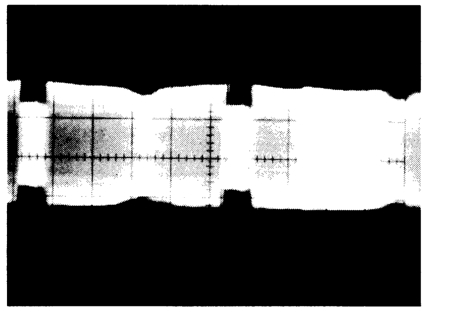
Schaltbild des PCM-Tonteiles
PCM Audio Schematic Diagram

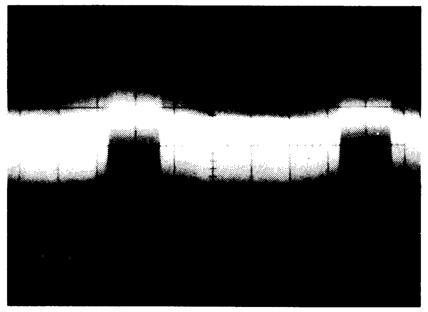

IC4506 AN6297S
IC4507 AN6297S
I.V CONST
AMP1
AMP2
BF
LEVEL SENSOR
CCA
CCA AMP
ED CONT
REC LEVEL
VR4505 10KB
VR4508 10KB
FL4501 VLF0859
FL4502 VLF0859
14K ACT LPF
VCC
1/2 VCC
IN
OUT
GND
AP ON
TP4508
TP4509
TP4510
QR4503 UN5212
PB LEVEL
VR4503 20KB
IC4504 CXK5816M-15L or LC3517BM-15
IC4503 CXK5816M-15L or LC3517BM-15
RAM
IC4502 MN6560FS
IC4501 MN6561FS
SAMPLE HOLD
A/D (D/A)
DATA
A/D DATA (DEF)
10→8
8→10
CLOCK GENERATOR
MASTER CLOCK VCO
SELF CLOCKING
X4501 VSX0394
ID INTERFACE
CRC CHECK
ADDRESS CHANGE
CLOCK VCO
SYNC SEPARATE DEMOD
Bi0 MOD
AUDIO ADDRESS
VR4504 20KB
Q4502 2SC3931
IC4505 AN6562S
Q4501 2SA1532
QR4501 UN5212
QR4502 UN5112
QR4516 UN5213
REC OUT LEVEL
VR4501 220B
VR4502 50KB
SLICER OUT LEVEL
VC4501 20P
VC4502 20P
L4505 ELKZH 3R9KA
D4502 MA335
D4508 MA335
TP4501
TP4502
TP4504
TP4505
TP4506
TP4507
TP4511
TP4512
Q4509 2SC3931
Q4510 2SC3931
Q4512 2SC3931
Q4513 2SC3931
FL4505 VLF0861
VR4507 2KB
P.B EQ FREQ
A-LINE
(A8)
(A10)
(A12)
(A9)
(A7)
(A11)
(A14)
(A13)
(A3)
(A4)
(A5)

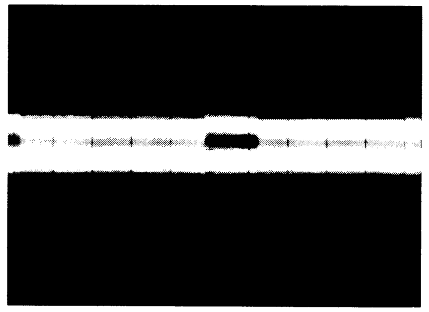
Schaltbild des PCM-Tonteiles
PCM Audio Schematic Diagram

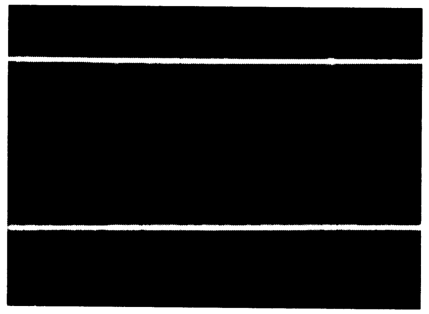

IC4503
CXK5816M-15L
or LC3517BM-15
RAM
GND
I/O 3
I/O 2
I/O 1
A0
A1
A2
A3
A4
A5
A6
A7
I/O 4
I/O 5
I/O 6
I/O 7
I/O 8
CS
A10
CE
WE
A9
A8
VCC
IC4501
MN6561FS
DATA
A/D DATA (DEF)
8→10
CLOCK GENERATOR
SELF CLOCKING
ID INTERFACE
CRC CHECK
ADDRESS CHANGE
11bit
CLOCK VCO
SYNC SEPARATE DEMOD
Bi∅ MOD
AUDIO ADDRESS
C4501 6V47
C4502 0.01
L4501 100µ
L4502 100µ
C4503 6V47
C4504 0.01
R4638 10K
R4637 10K
IC4505 AN6562S
VCC
GND
R4517 3300
R4518 180
D4508 MA335
R4512 680
R4514 330
R4513 330
L4506 10µ
R4511 330
C4533 56P
R4516 680
R4521 82K
R4520 56K
R4522 100K
C4615 0.047
R4519 100
C4532 1000P
QR4502 UN5112
R4505 4700
R4504 10K
R4502 10K
R4618 820
REC OUT LEVEL
VR4501 220B
C4531 6V47
C4505 16V10
C4626 68P
C4530 0.01
L4507 100µ
VC4502 20P
Q4501 2SA1532
R4503 1K
C4506 0.1
R4661 33K
R4662 10K
TP4502
TP4501
QR4501 UN5212
R4501 10K
QR4516 UN5213
47K
22K
A LINE
(A1)
(A2)
(A3)
(A4)
(A5)
(A6)
(A14)

Oszillogramme des PCM-Tonteiles
PCM Audio Circuit Waveforms


TP4504 PLAY
1.0V/2.0msec. div.


TP4505 PLAY
0.5V/2.0msec. div.


TP4507 PLAY
20mV/2.0msec. div.


TP4512 PLAY
1.0V/0.5msec. div.

Spannungstabelle des PCM-Tonteiles
PCM Audio Voltage Chart

REF. NO.	IC4501																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	2.5	0	4.9	0	0	4.1	2.2	0	0	0	0	0	2.5	0	4.9	4.8	0
STOP	0	2.5	0	4.9	0	0	~	2.2	0	0	0	0	0	0	0	2.5	0	4.9

REF. NO.	IC4501																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PLAY	0	0	0	0	0	0	0	0	4.9	0.6	1.1	0.8	2.9	0	1.8	3.9	1.8	0
STOP	0	0	0	0	0	0	0	0	4.9	0	1.1	0.8	2.9	0	2.7	0	1.8	0

REF. NO.	IC4501																	
MODE	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
PLAY	2.7	4.8	4.8	1.8	3.1	3.1	0	3.5	1.8	1.8	2.0	0	4.4	4.4	4.3	4.4	4.2	4.2
STOP	2.7	4.8	4.8	1.8	3.1	3.1	1.8	3.5	2.8	1.8	2.0	0	4.5	0	4.3	4.4	4.4	4.3

REF. NO.	IC4501																	
MODE	55	56	57	58	59	60	61	62	63	64								
PLAY	4.2	4.3	0	0	2.3	0	2.3	0	0	2.3								
STOP	4.3	4.3	0	0	2.3	0	0	0	0	2.3								

REF. NO.	IC4503																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	2.7	1.8	2.7	2.7	2.7	2.7	2.7	2.0	4.3	4.3	4.3	0	4.3	4.2	4.3	4.4	4.4	0
STOP	1.8	2.7	1.8	1.8	1.8	1.8	1.8	2.0	4.3	4.4	4.3	0	4.3	4.3	4.4	4.5	4.5	0

REF. NO.	IC4503																	
MODE	19	20	21	22	23	24												
PLAY	3.5	3.1	3.8	0	3.9	4.8												
STOP	3.5	3.1	4.8	1.8	0.5	4.8												

REF. NO.	IC4502																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	3.7	3.7	1.8	0.3	0.3	1.7	0	0	1.7	3.0	1.1	0	1.7	1.8	1.7	1.7	2.3	0
STOP	3.7	3.7	1.8	3.7	0	1.8	0	1.7	1.8	2.8	1.0	4.9	1.7	1.8	1.7	1.8	2.3	3.0

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.

DC voltages tol. ± 15 % measured with digital voltmeter against GND.

Spannungstabelle des PCM-Tonteiles
PCM Audio Voltage Chart

REF. NO.	IC4502																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PLAY	0	2.3	0	2.3	0	0	4.3	4.2	4.2	4.2	4.4	4.3	4.4	4.4	2	2.8	1.8	2.1
STOP	0	0	0	2.3	0	0	4.3	4.3	4.3	4.4	4.4	4.3	0	4.5	2.0	1.8	2.8	0

REF. NO.	IC4502																	
MODE	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
PLAY	0	0.4	0	0	0.4	0	0	0	4.9	2.6	2.5	2.6	3.7	2.6	2.6	0	2.6	2.6
STOP	0	0.5	0	0	0.5	0	0	0	4.9	2.7	2.6	2.6	3.7	0.2	2.6	0	2.6	0

REF. NO.	IC4502																	
MODE	55	56	57	58	59	60	61	62	63	64								
PLAY	0	0	4.9	0	0	0	0	2.0	2.4	3.7								
STOP	0	0	4.9	0	0	0	0	2.1	2.3	3.7								

REF. NO.	IC4504																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	2.7	1.8	2.7	2.7	2.7	2.7	2.7	2.0	4.3	4.3	4.3	0	4.3	4.2	4.4	4.4	4.4	0
STOP	1.8	2.7	1.8	1.8	1.8	1.8	1.8	2.0	4.3	4.4	4.3	0	4.3	4.3	4.4	4.4	4.5	0

REF. NO.	IC4504																	
MODE	19	20	21	22	23	24												
PLAY	3.5	3.1	4.8	1.8	3.9	4.8												
STOP	3.5	3.1	4.8	1.8	3.9	4.8												

REF. NO.	IC4505																	
MODE	1	2	3	4	5	6	7	8										
PLAY	1.7	1.7	1.8	0	1.2	1.0	3.6	4.9										
STOP	2.4	1.9	1.9	0	1.2	1.0	3.6	4.9										

REF. NO.	IC4506																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	2.4	0.9	1.8	1.8	0.6	2.5	2.5	2.5	0	2.4	2.4	2.4	0.6	2.4	2.4	2.4	2.4
STOP	0	2.5	0.9	2.3	2.3	0.6	2.4	2.5	2.5	4.9	2.5	2.5	2.4	0.6	2.5	2.5	2.4	2.4

REF. NO.	IC4506																	
MODE	19	20																
PLAY	4.9	2.5																
STOP	4.9	2.5																

REF. NO.	IC4507																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	2.4	0	2.0	2.0	0.6	2.5	2.5	2.5	0	2.4	2.4	2.4	0.6	2.4	2.5	2.5	2.4
STOP	0	2.5	0.8	2.4	2.4	0.6	2.5	0	2.5	4.9	2.5	2.5	2.4	0	2.4	2.4	2.4	2.4

REF. NO.	IC4507																	
MODE	19	20																
PLAY	4.9	2.5																
STOP	4.9	2.5																

REF. NO.	IC4508																	
MODE	1	2	3	4	5	6	7	8										
PLAY	3.3	2.5	2.5	0	2.5	2.5	0.6	4.9										
STOP	3.4	2.5	2.5	0	2.5	2.5	0.6	4.9										

REF. NO.	IC4509																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	0	0	0	0	0.3	0.3	0.3	0	4.9	0	−4.9	−2.4	2.5	4.9	0	4.9	0
STOP	0	0	0	0	0	0.2	0.2	0.2	0	4.9	0	−4.9	−2.4	2.5	4.9	4.4	4.9	0

REF. NO.	IC4509									IC4510								
MODE	19	20								1	2	3	4	5	6	7	8	
PLAY	0	4.9								1.9	0	1.9	0	1.9	1.9	1.9	4.9	
STOP	0	4.9								2.5	2.5	0	0	2.5	2.5	2.5	4.9	

REF. NO.	IC4511																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	1.9	0	0	1.9	0	0.7	1.9	1.8	1.8	1.8	0	0	1.8	4.9	0	0	1.9	1.9
STOP	2.4	2.2	4.1	0	2.5	0.7	2.5	0	0	0	2.5	4.9	4.5	4.9	0	4.5	2.5	2.5

REF. NO.	IC4511																	
MODE	19	20	21	22	23	24	25	26	27	28								
PLAY	1.9	1.9	1.8	1.9	0.7	1.9	1.9	0	2	0								
STOP	2.5	2.5	2.5	2.5	0.7	0	2.5	4.1	2.2	2.4								

REF. NO.	Q4501			Q4502			Q4503			Q4504			Q4507			Q4508		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	3.2	0	2.5	0.3	4.9	0.4	4.9	3.7	4.2	0	3.6	0.6	0	0	0.7	0	0	0.8
STOP	3.2	0	2.5	3.7	4.9	4.4	4.9	3.7	4.2	0	3.5	6	0	0	0	0	4.9	0

REF. NO.	Q4509			Q4510			Q4511			Q4512			Q4513			Q4514		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.8	4.0	1.6	3.3	5.0	4.0	0	0.4	0	0.3	3.2	1.1	2.5	5.0	3.2	0	0	0.6
STOP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6

REF. NO.	Q4515			Q4516			Q4517			Q4518			QR4501			QR4502		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.6	5.0	3.4	0.8	3.3	1.5	0	0	0	0	0	0	0	2.5	2.5	4.9	0	4.9
STOP	0	0	0	0	0	0	0	0	0.6	0	0	0.6	0	4.9	0	4.9	0	4.9

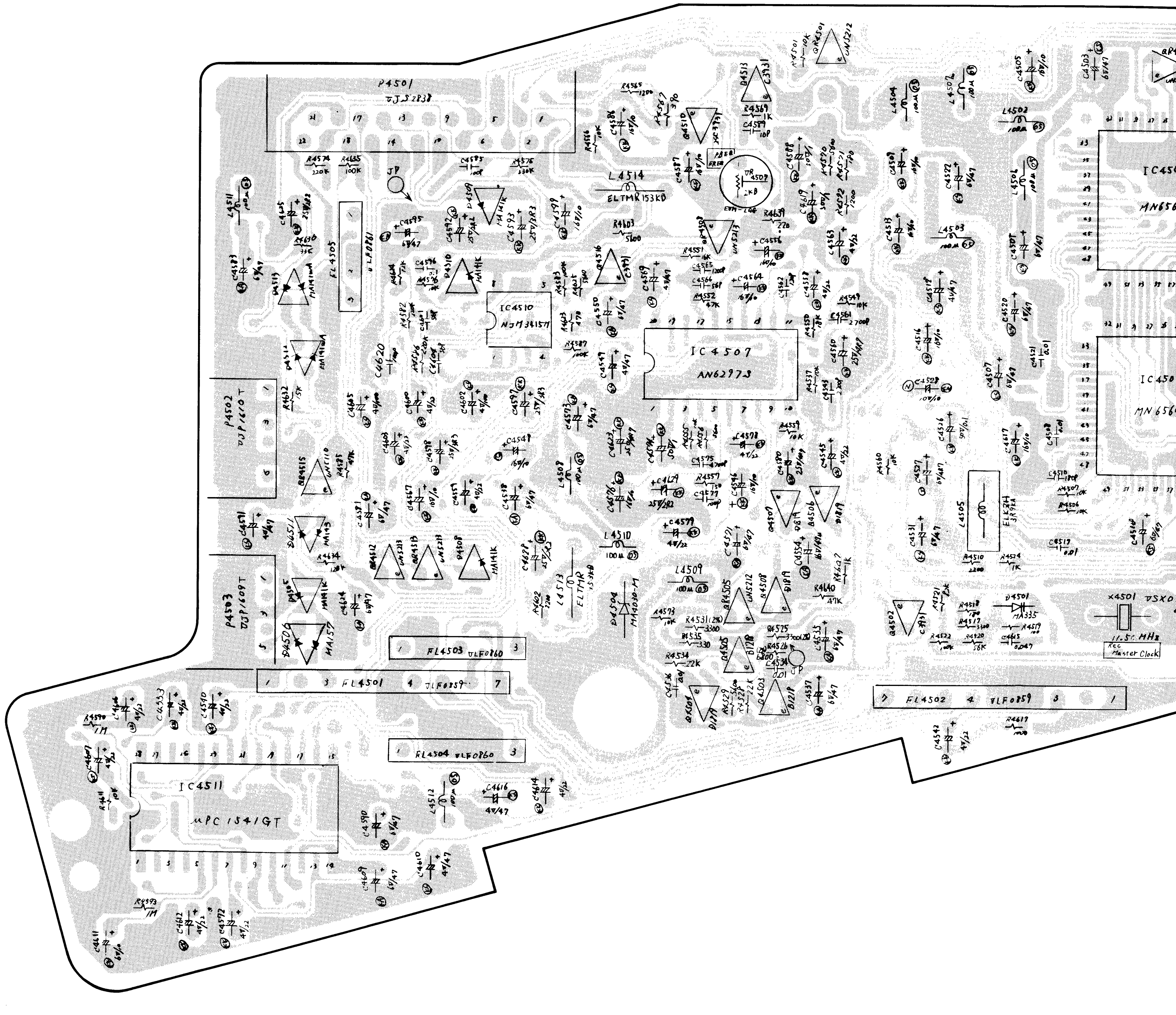
REF. NO.	QR4503			QR4504			QR4505			QR4506			QR4507			QR4508		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	4.6	0	0	4.9	4.9	0	0.7	0	0	0.6	0	0	0	5.0	0	4.9	0
STOP	0	0	4.9	4.9	0	4.9	0	0	4.9	0	0.6	0	0	0	5.0	0	4.9	0.4

REF. NO.	QR4509			QR4510			QR4511			QR4512			QR4513			QR4516		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	4.5	5	0	5	0	5	0	0	4.0	0	0	0	4.0	0	4.9	0
STOP	0	0.4	0	5	5	0	0	0	5	0	0	4.9	0	4.5	0	0	4.9	0

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.

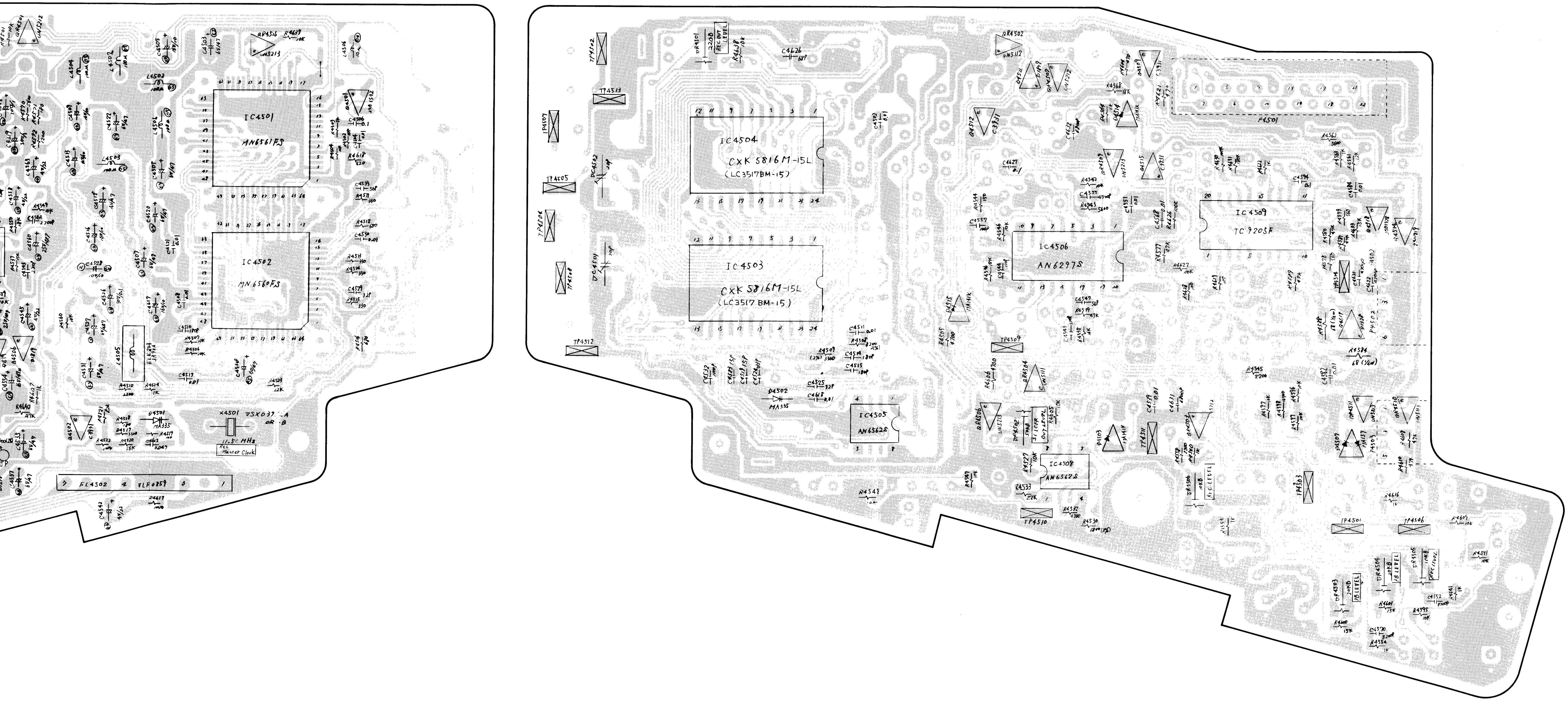
DC voltages tol. ± 15 % measured with digital voltmeter against GND.

PCM Tonplatine
PCM Audio C.B.A.



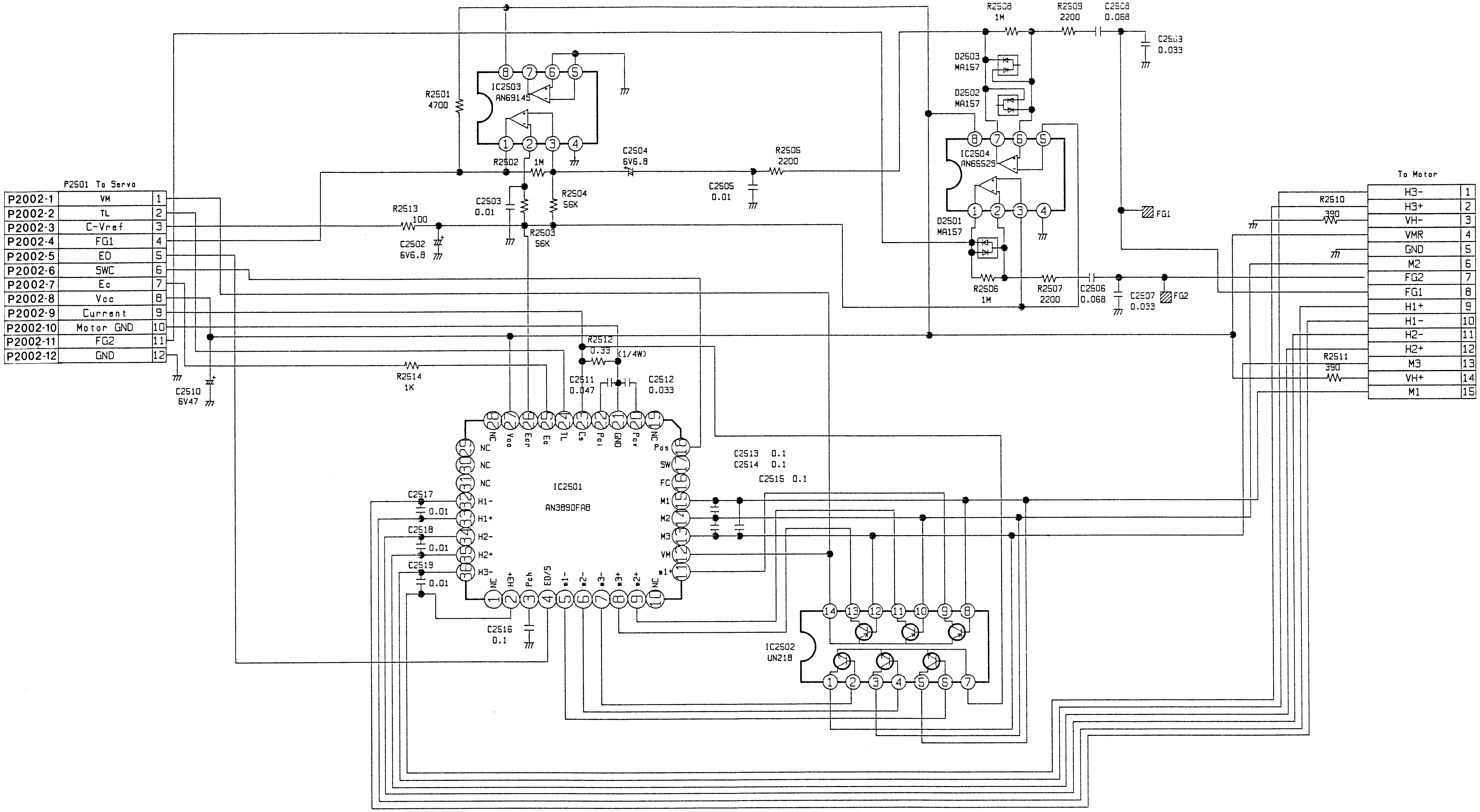
COMPONENT SIDE = Bestückungsseite

PCM Tonplatine
PCM Audio C.B.A.


IC4501
MN6561FS
IC4502
MN6560FS
IC4504
CXK5816M-15L
(LC3517BM-15)
IC4503
CXK5816M-15L
(LC3517BM-15)
IC4505
AN6562S
IC4506
AN6297S
IC4508
AN6562S
IC4509
TC9205F
X4501
11.5 MHz
Master Clock
FL4502
TLF0859
P4501
P4502
TP4505
TP4509
TP4510
TP4501
TP4506
TP4512
D4502
MA355
D4501
MA355

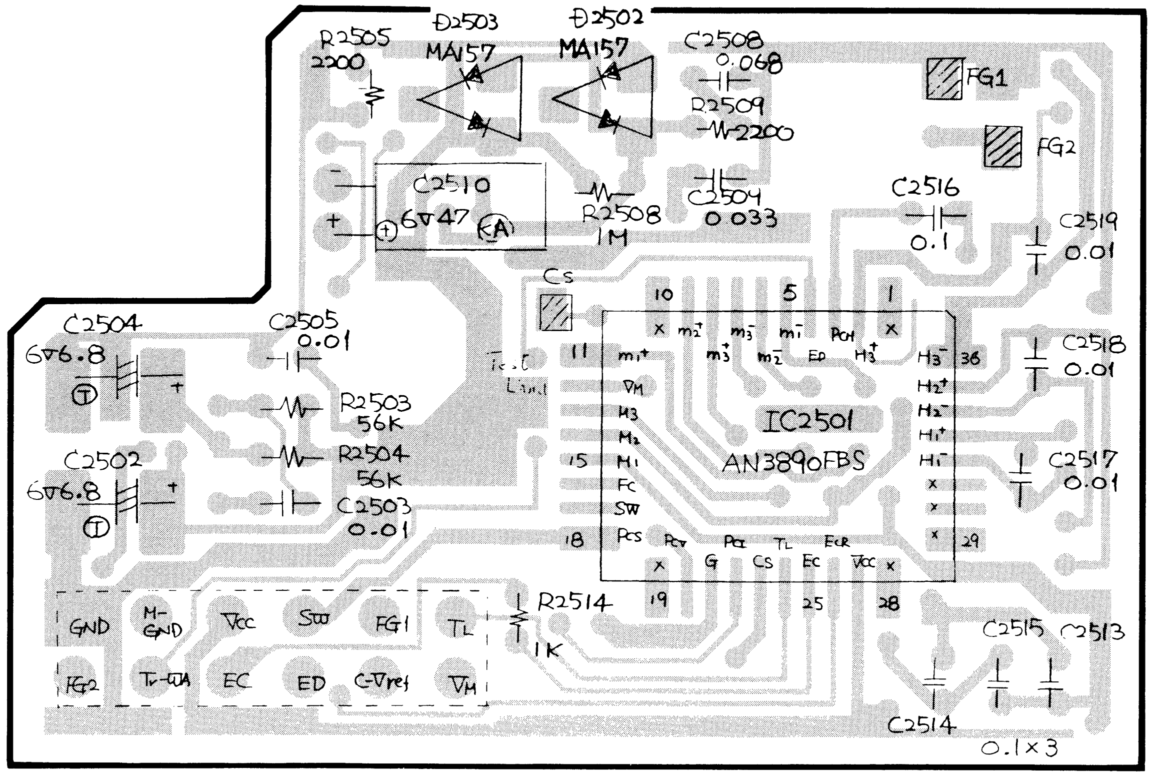
FOIL SIDE = Lötseite

Schaltbild der Capstan-Treiberschaltung
Capstan Drive Schematic Diagram

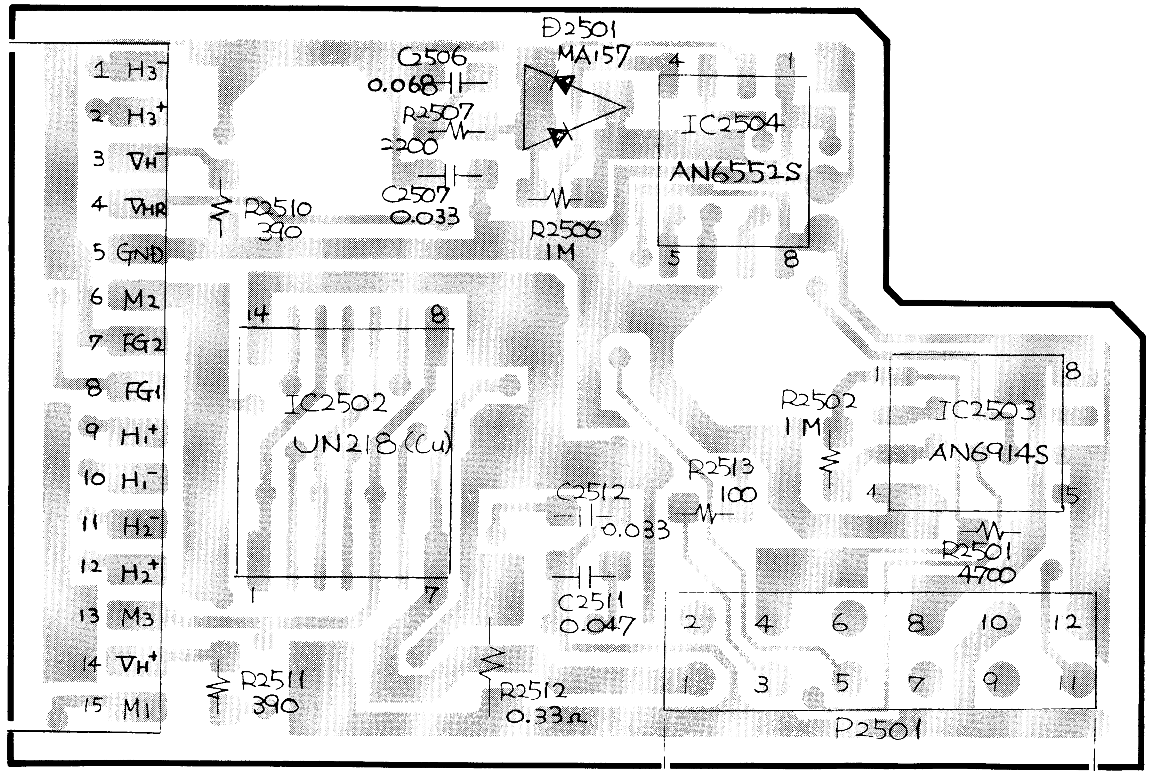

P2501 To Servo
P2002-1 VM 1
P2002-2 TL 2
P2002-3 C-Vref 3
P2002-4 FG1 4
P2002-5 ED 5
P2002-6 SWC 6
P2002-7 Ec 7
P2002-8 Vcc 8
P2002-9 Current 9
P2002-10 Motor GND 10
P2002-11 FG2 11
P2002-12 GND 12
To Motor
H3- 1
H3+ 2
VH- 3
VMR 4
GND 5
M2 6
FG2 7
FG1 8
H1+ 9
H1- 10
H2- 11
H2+ 12
M3 13
VH+ 14
M1 15
IC2503 AN6914S
R2501 4700
R2502 1M
C2503 0.01
R2504 56K
R2503 56K
R2513 100
C2502 6V6.8
C2504 6V6.8
C2505 0.01
R2505 2200
R2508 1M
R2509 2200
C2508 0.068
C2509 0.033
D2503 MA157
D2502 MA157
IC2504 AN6552S
D2501 MA157
R2506 1M
R2507 2200
C2506 0.068
C2507 0.033
FG1
FG2
R2510 390
R2511 390
C2510 6V47
R2514 1K
R2512 0.33 (1/4W)
C2511 0.047
C2512 0.033
IC2501 AN3890FAB
NC Vcc Ecr Ec TL Cs Pol GND Pov NC
Pos SW FC M1 M2 M3 VM ■1+
NC H3+ Pch ED/S ■1- ■2- ■3- ■3+ ■2+ NC
NC NC NC H1- H1+ H2- H2+ H3-
C2513 0.1
C2514 0.1
C2515 0.1
C2517 0.01
C2518 0.01
C2519 0.01
C2516 0.1
IC2502 UN218

Für Werte ohne Bezeichnung F (µF) oder Ω einsetzen.
Read F (µF) or Ω respectively unless otherwise noted.

Capstan-Treiberplatine
Capstan Drive C.B.A.


R2505
2200
D2503
MA157
D2502
MA157
C2508
0.068
R2509
2200
FG1
FG2
C2510
6V47
(A)
R2508
1M
C2504
0.033
C2516
0.1
C2519
0.01
CS
C2504
6V6.8
C2505
0.01
R2503
56K
R2504
56K
C2503
0.01
C2502
6V6.8
IC2501
AN3890FBS
C2518
0.01
C2517
0.01
10
5
1
11
15
18
19
25
28
29
36
R2514
1K
C2515
C2513
C2514
0.1×3
GND
M-GND
Vcc
SW
FG1
TL
FG2
TL-WA
EC
ED
C-Vref
VH

COMPONENT SIDE = Bestückungsseite


TO MOTOR
1 H3-
2 H3+
3 VH-
4 VHR
5 GND
6 M2
7 FG2
8 FG1
9 H1+
10 H1-
11 H2-
12 H2+
13 M3
14 VH+
15 M1
D2501
MA157
C2506
0.068
R2507
2200
C2507
0.033
R2510
390
R2506
1M
IC2504
AN6552S
4
1
5
8
14
8
IC2502
UN218 (Cu)
1
7
R2502
1M
IC2503
AN6914S
R2513
100
C2512
0.033
R2501
4700
C2511
0.047
R2511
390
R2512
0.33Ω
2
4
6
8
10
12
1
3
5
7
9
11
P2501
TO MAIN

FOIL SIDE = Lötseite

Spannungstabelle der Capstan-Treiber-IC's
Capstan Drive IC's Voltage Chart

REF. NO.	IC2501																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	2.5	1.6	0	0.4	0.4	0.4	1.4	1.4	0	1.4	1.9	0.9	0.9	0.9	4.3	0	1.9
STOP	0	2.5	1.6	2.2	0	0	0	7.4	7.4	0	0	7.9	0	0	0	4.2	0.2	0.1

REF. NO.	IC2501																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PLAY	0	0.6	0	1.2	0	0.4	2.8	2.9	5.0	0	0	0	0	2.5	2.5	2.5	2.5	2.5
STOP	0	0	0	0.1	0	0.4	1.4	2.9	5.0	0	0	0	0	2.5	2.5	2.5	2.5	2.5

REF. NO.	IC2502																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
PLAY	1.0	0.4	0.9	0.4	0.9	0.4	0	0.9	1.6	0.9	1.6	0.9	1.6	1.9				
STOP	0	0.2	0	0.2	0	0.2	0	0	7.4	0	7.4	0	7.4	8.0				

REF. NO.	IC2503									IC2504								
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	
PLAY	2.3	2.9	2.9	0	0	0	1.1	5.0		2.9	2.9	2.9	0	2.9	2.9	2.9	5.0	
STOP	0	2.8	2.8	0	0	0	1.1	5.0		2.5	2.9	2.9	0	2.9	2.9	2.9	5.0	

Spannungstabelle des Kopfverstärkerteiles
Head Amp. Voltage Chart

REF. NO.	IC5001																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	0.6	0	0	0	0	0	4.7	0	0	0	0	0	0	0	0	0	0
STOP	0	0	0	0	0	0	0	4.7	0	0	0	0	0	0	0	0	0	0

REF. NO.	IC5001																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PLAY	0	4.9	0	0	0	4.9	3.9	2.1	3.9	4.9	4.8	0	2.3	0	0	4.5	0	2.2
STOP	0	4.9	0	0	0	4.9	3.9	2.1	3.9	4.9	4.8	0	2.3	0	0	4.5	0	2.2

REF. NO.	IC5001																	
MODE	37	38	39	40	41	42	43	44	45	46	47	48						
PLAY	1.7	0	2.8	0.4	2.2	2.3	0	0	0	0	0	0.7						
STOP	1.8	0	2.3	0.5	2.3	2.3	4.9	0	0	0	0	0.7						

REF. NO.	IC5002																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PLAY	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0.7	0	0	0
STOP	0	0	0	0	0	0	0	4.7	0.7	0	0	0	0.6	0	0.7	0	0	0

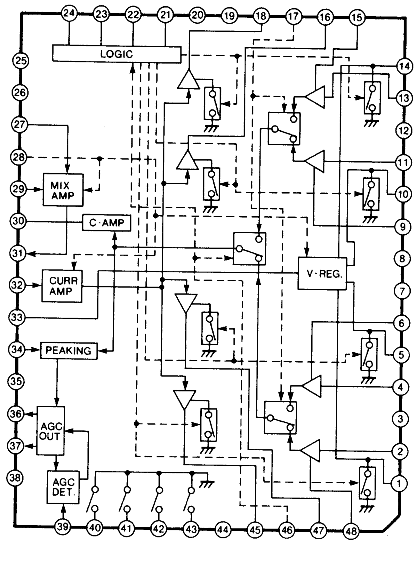
REF. NO.	IC5002																	
MODE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PLAY	0	0	0	0	0	0	3.9	2.0	3.9	4.9	4.8	0	2.3	0	0	4.5	0	2.1
STOP	0	4.9	0	4.9	0	0	3.9	2.7	3.9	4.9	4.8	0	2.3	0	0	4.5	0	2.1

REF. NO.	IC5002																	
MODE	37	38	39	40	41	42	43	44	45	46	47	48						
PLAY	1.7	0	2.7	0.4	2.1	2.3	4.9	0	0	4.0	0	0						
STOP	1.8	0	2.3	0.4	2.2	2.3	4.9	0	0	4.0	0	0						

REF. NO.	IC5003																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
PLAY	2.9	0	2.9	4.9	2.4	2.9	0	2.9	2.9	2.5	1.5	1.5	0	1.5	2.5	2.9		
STOP	0	0	2.9	0	4.9	2.9	0	2.9	2.9	4.9	1.5	1.5	0	1.5	4.9	2.9		

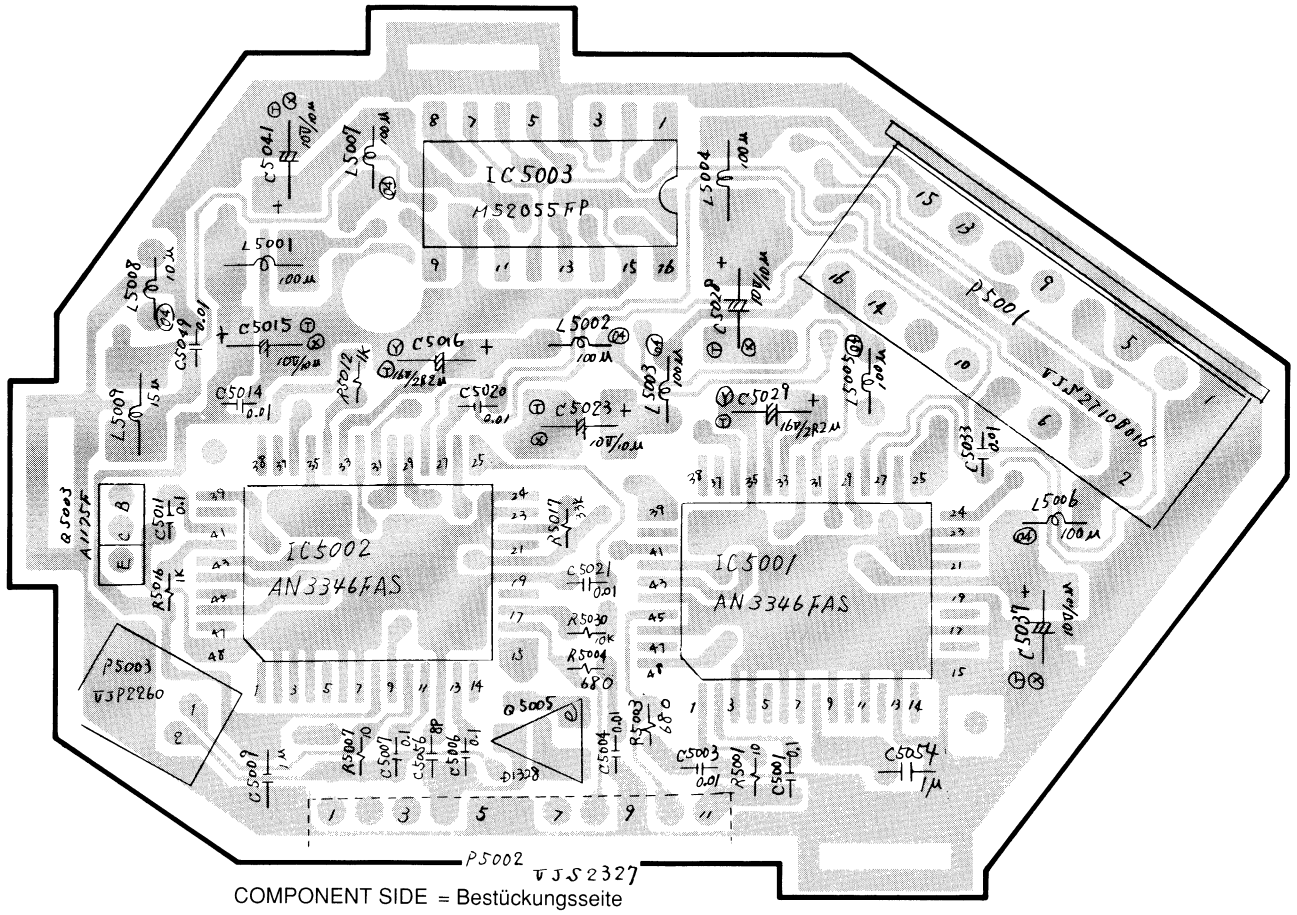
REF. NO.	Q5001			Q5002			Q5003			Q5004			Q5005			QR5001		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	1.7	0	1.0	1.7	0	1.1	0	0	4.9	4.9	0	4.9	0	0	0	0	3.0	0
STOP	1.7	0	1.1	1.7	0	1.1	4.8	0	4.8	4.9	0	4.9	0	0	0.6	0	3.0	0

Blockschaltbild der IC's 5001, 5002
IC's 5001, 5002 Block Diagram
(AN 3346 FAS)

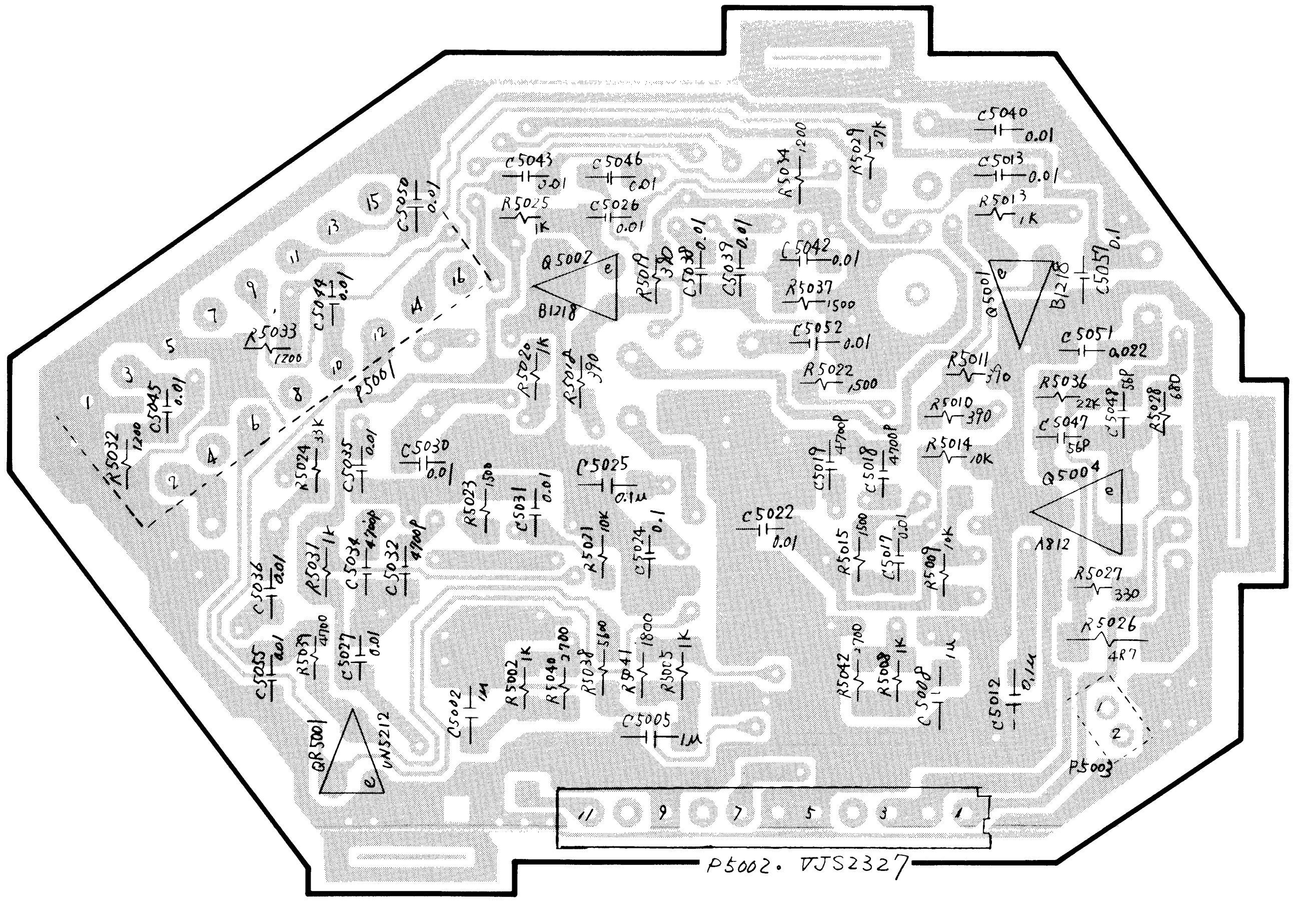

LOGIC
MIX AMP
C-AMP
CURR AMP
V-REG.
PEAKING
AGC OUT
AGC DET
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen.
DC voltages tol. ± 15 % measured with digital voltmeter against GND.

Kopfverstärkerplatine
Head Amplifier C.B.A.

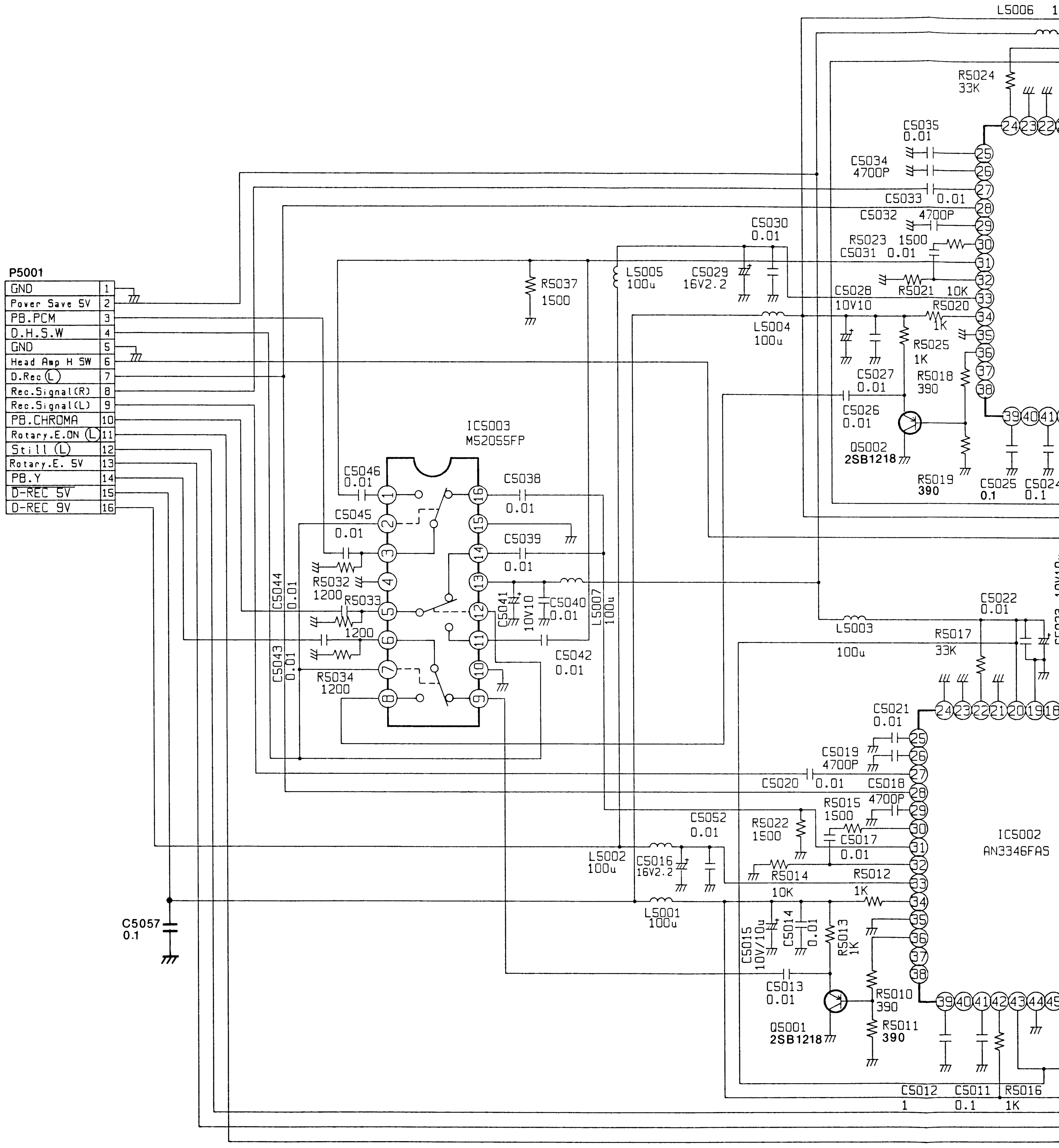

IC5003
M52055FP
L5001
L5002
L5004
L5005
L5006
L5008
L5009
P5001
VJSP2710B016
IC5002
AN3346FAS
IC5001
AN3346FAS
Q5003
A1175F
P5003
VJSP2260
Q5005
P5002
VJS2327

COMPONENT SIDE = Bestückungsseite

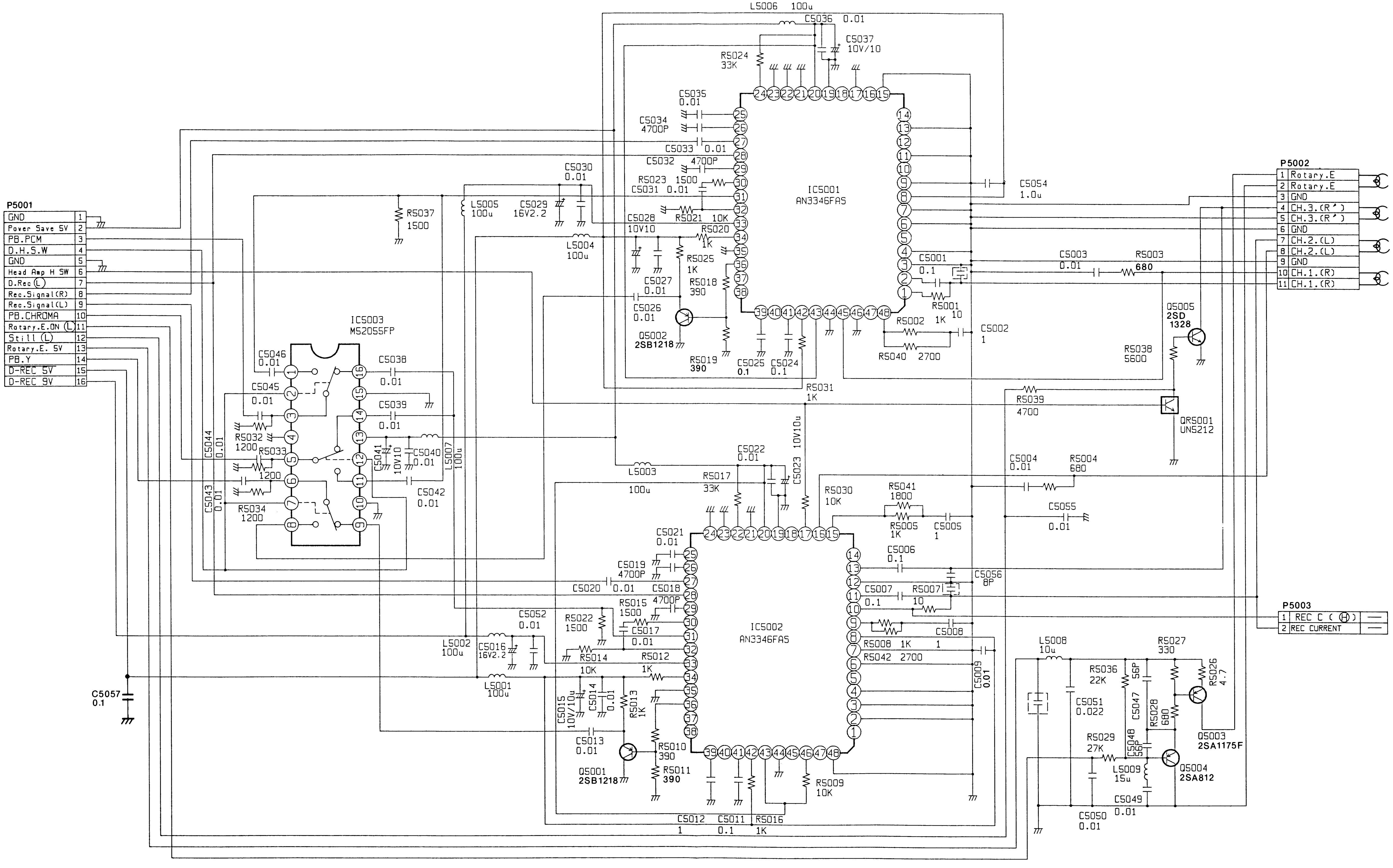

Q5002
B1218
Q5001
B1218
Q5004
A812
QR5001
UN5212
P5003
P5002. VJS2327

FOIL SIDE = Lötseite

Schaltbild des Kopfverstärkerteiles
Head Amplifier Schematic Diagram

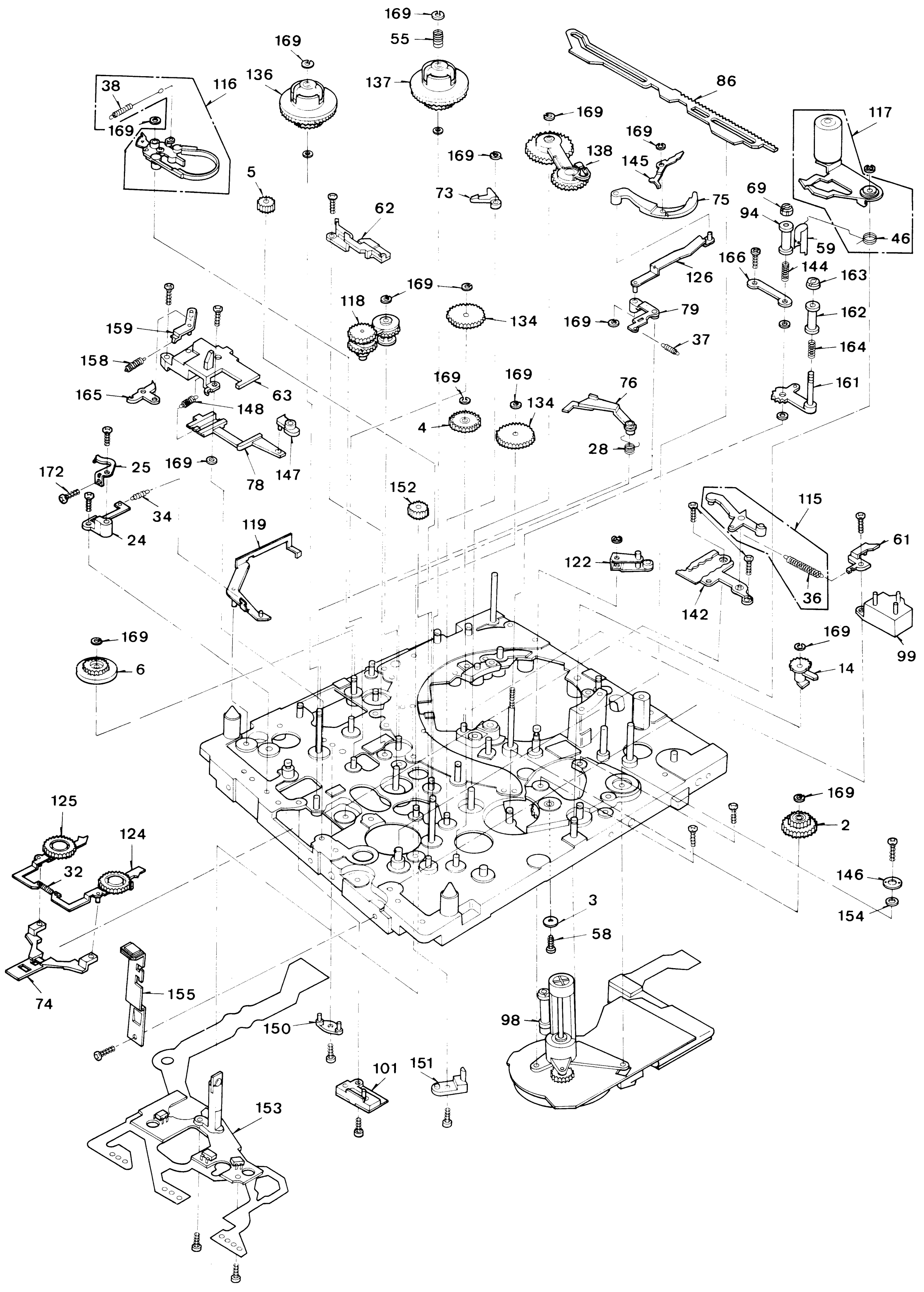

P5001
GND 1
Power Save 5V 2
PB.PCM 3
D.H.S.W 4
GND 5
Head Amp H SW 6
D.Rec (L) 7
Rec.Signal(R) 8
Rec.Signal(L) 9
PB.CHROMA 10
Rotary.E.ON (L) 11
Still (L) 12
Rotary.E. 5V 13
PB.Y 14
D-REC 5V 15
D-REC 9V 16
IC5003
M52055FP
IC5002
AN3346FAS
Q5001
2SB1218
Q5002
2SB1218
C5057
0.1
L5006
R5024
33K
R5037
1500
L5005
100u
C5029
16V2.2
C5030
0.01
L5004
100u
L5003
100u
L5002
100u
L5001
100u
L5007
100u
R5017
33K

Schaltbild des Kopfverstärkerteiles
Head Amplifier Schematic Diagram


P5001
1 GND
2 Power Save 5V
3 PB.PCM
4 D.H.S.W
5 GND
6 Head Amp H SW
7 D.Rec (L)
8 Rec.Signal(R)
9 Rec.Signal(L)
10 PB.CHROMA
11 Rotary.E.ON (L)
12 Still (L)
13 Rotary.E. 5V
14 PB.Y
15 D-REC 5V
16 D-REC 9V
P5002
1 Rotary.E
2 Rotary.E
3 GND
4 CH.3.(R')
5 CH.3.(R')
6 GND
7 CH.2.(L)
8 CH.2.(L)
9 GND
10 CH.1.(R)
11 CH.1.(R)
P5003
1 REC C (H)
2 REC CURRENT
IC5001 AN3346FAS
IC5002 AN3346FAS
IC5003 M52055FP
L5006 100u
C5036 0.01
C5037 10V/10
R5024 33K
C5035 0.01
C5034 4700P
C5033 0.01
C5032 4700P
C5030 0.01
R5023 1500
C5031 0.01
R5037 1500
L5005 100u
C5029 16V2.2
C5028 10V10
R5021 10K
R5020 1K
L5004 100u
R5025 1K
C5027 0.01
R5018 390
C5026 0.01
Q5002 2SB1218
R5019 390
C5025 0.1
C5024 0.1
C5054 1.0u
C5001 0.1
R5001 1K
10
R5002 1K
C5002 1
R5040 2700
C5003 0.01
R5003 680
Q5005 2SD 1328
R5038 5600
R5031 1K
R5039 4700
QR5001 UN5212
C5046 0.01
C5045 0.01
C5038 0.01
C5039 0.01
R5032 1200
R5033 1200
R5034 1200
C5044 0.01
C5043 0.01
C5041 10V10
C5040 0.01
L5007 100u
C5042 0.01
L5003 100u
C5022 0.01
C5023 10V10u
R5017 33K
R5030 10K
R5041 1800
R5005 1K
C5005 1
C5004 0.01
R5004 680
C5055 0.01
C5021 0.01
C5019 4700P
C5020 0.01
C5018 4700P
R5015 1500
C5052 0.01
R5022 1500
C5017 0.01
L5002 100u
C5016 16V2.2
R5014 10K
R5012 1K
L5001 100u
C5057 0.1
C5015 10V/10u
C5014
0.01
R5013 1K
C5013 0.01
Q5001 2SB1218
R5010 390
R5011 390
C5006 0.1
C5056 8P
C5007 0.1
R5007 10
C5008 1
R5008 1K
R5042 2700
C5009 0.01
R5009 10K
C5012 1
C5011 0.1
R5016 1K
L5008 10u
C5051 0.022
R5036 22K
C5047 56P
R5028 680
R5027 330
R5026 4.7
Q5003 2SA1175F
R5029 27K
C5048 56P
L5009 15u
Q5004 2SA812
C5049 0.01
C5050 0.01

Für Werte ohne Bezeichnung F (µF) oder Ω einsetzen.
Read F (µF) or Ω respectively unless otherwise noted.

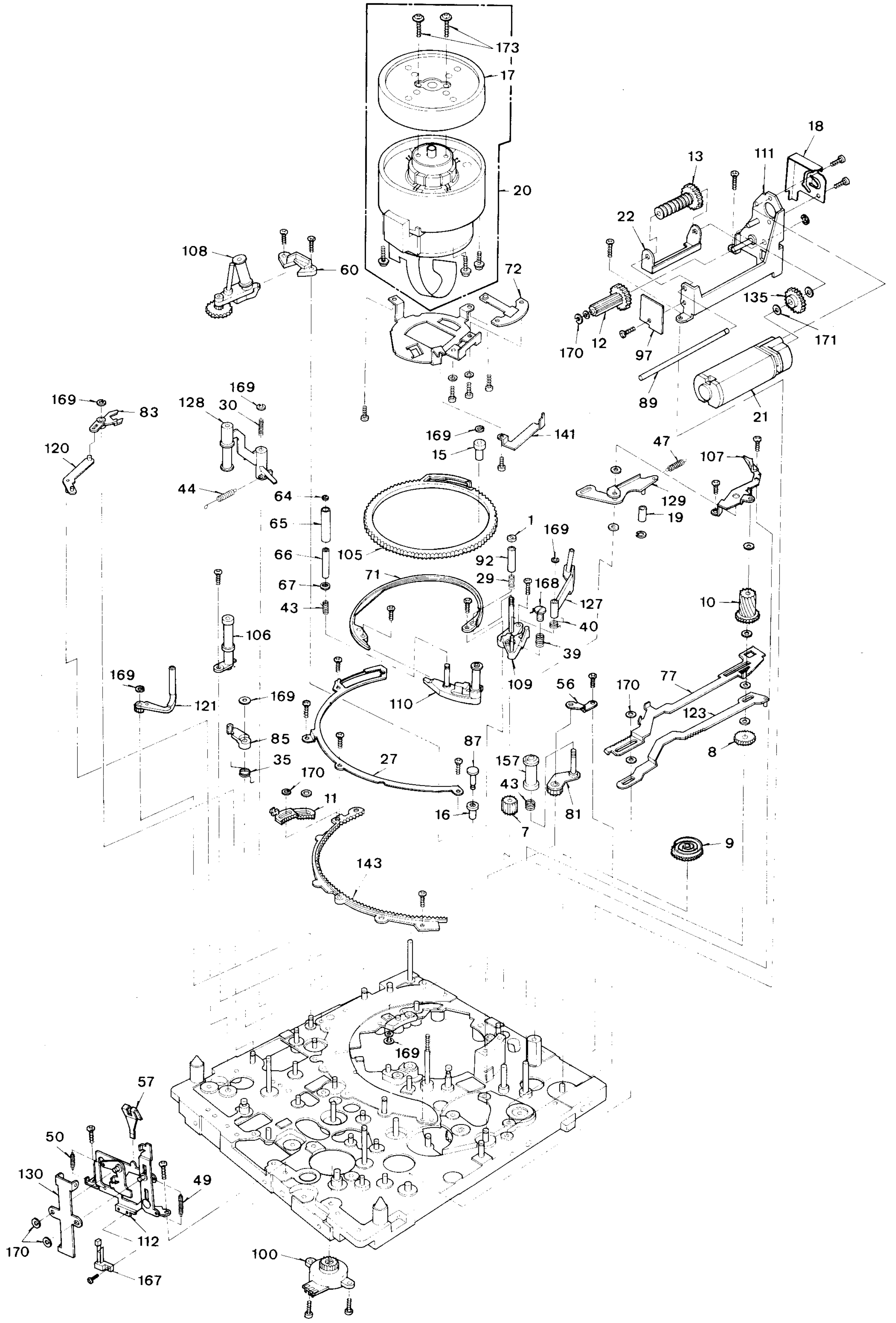
Explosionszeichnung CR-8800 H (1) Laufwerkteile 1
Exploded View CR-8800 H (1) VTR Mechanism Section 1



Lfd. Nr. Item no.	(Explo.) (Explo.)	Bestell-Nr. Part no.
2	(1)	8 619 414 306
3	(1)	8 619 416 318
4	(1)	8 619 414 307
5	(1)	8 619 414 308
6	(1)	8 619 414 309
14	(1)	8 619 414 317
24	(1)	8 619 414 125
25	(1)	8 619 416 131
28	(1)	8 619 414 600
32	(1)	8 619 414 603
34	(1)	8 619 414 604
36	(1)	8 619 414 606
37	(1)	8 619 414 607
38	(1)	8 619 414 608
46	(1)	8 619 414 613
55	(1)	8 619 414 617
58	(1)	8 619 416 322
59	(1)	8 619 416 804
61	(1)	8 619 414 129
62	(1)	8 619 414 130
63	(1)	8 619 414 131
69	(1)	8 619 416 326
73	(1)	8 619 414 134
74	(1)	8 619 414 135
75	(1)	8 619 414 136
76	(1)	8 619 414 137
78	(1)	8 619 414 139
79	(1)	8 619 414 140
86	(1)	8 619 414 144
94	(1)	8 619 414 327
98	(1)	8 619 520 410
99	(1)	8 619 520 253
101	(1)	8 619 424 205
115	(1)	8 619 414 150
116	(1)	8 619 414 151
117	(1)	8 619 414 332
118	(1)	8 619 414 333
119	(1)	8 619 414 152
122	(1)	8 619 414 155
124	(1)	8 619 414 157
125	(1)	8 619 414 158
126	(1)	8 619 414 159
134	(1)	8 619 414 335
136	(1)	8 619 414 303
137	(1)	8 619 414 304
138	(1)	8 619 414 163
142	(1)	8 619 414 165
144	(1)	8 619 414 620
145	(1)	8 619 414 166
146	(1)	8 619 414 400
147	(1)	8 619 414 167
148	(1)	8 619 414 621
150	(1)	8 619 414 168
151	(1)	8 619 414 169
152	(1)	8 619 414 338
153	(1)	8 619 590 851
154	(1)	8 619 414 501
155	(1)	8 619 424 500
158	(1)	8 619 414 622
159	(1)	8 619 414 171
161	(1)	8 619 414 172
162	(1)	8 619 414 340
163	(1)	8 619 414 341
164	(1)	8 619 414 623
165	(1)	8 619 414 173
166	(1)	8 619 414 174
169	(1)	8 619 414 401
172	(1)	8 619 414 508

Lfd. Nr. Item no.	(Explo.) (Explo.)	Bestell-Nr. Part no.
1	(2)	8 619 414 305
7	(2)	8 619 414 310
8	(2)	8 619 414 311
9	(2)	8 619 414 312
10	(2)	8 619 414 313
11	(2)	8 619 414 314
12	(2)	8 619 414 315
13	(2)	8 619 414 316
15	(2)	8 619 414 318
16	(2)	8 619 414 319
17	(2)	8 619 530 612
18	(2)	8 619 416 320
19	(2)	8 619 414 320
20	(2)	8 619 530 611
21	(2)	8 619 424 401
22	(2)	8 619 414 124
27	(2)	8 619 414 127
29	(2)	8 619 414 601
30	(2)	8 619 414 602
35	(2)	8 619 414 605
39	(2)	8 619 414 609
40	(2)	8 619 414 610
43	(2)	8 619 414 611
44	(2)	8 619 414 612
47	(2)	8 619 414 614
49	(2)	8 619 414 615
50	(2)	8 619 414 616
56	(2)	8 619 414 618
57	(2)	8 619 414 619
60	(2)	8 619 414 128
64	(2)	8 619 416 323
65	(2)	8 619 406 023
66	(2)	8 619 416 324
67	(2)	8 619 416 325
71	(2)	8 619 414 132
72	(2)	8 619 414 133
77	(2)	8 619 414 138
81	(2)	8 619 414 141
83	(2)	8 619 414 142
85	(2)	8 619 414 143
87	(2)	8 619 414 324
89	(2)	8 619 414 325
92	(2)	8 619 414 326
97	(2)	8 619 414 145
100	(2)	8 619 424 204
105	(2)	8 619 414 328
106	(2)	8 619 414 329
107	(2)	8 619 414 146
108	(2)	8 619 414 330
109	(2)	8 619 414 147
110	(2)	8 619 414 331
111	(2)	8 619 414 148
112	(2)	8 619 414 149
120	(2)	8 619 414 153
121	(2)	8 619 416 132
123	(2)	8 619 414 156
127	(2)	8 619 414 160
128	(2)	8 619 416 327
129	(2)	8 619 414 161
130	(2)	8 619 414 162
135	(2)	8 619 414 336
141	(2)	8 619 414 164
143	(2)	8 619 414 337
157	(2)	8 619 414 339
167	(2)	8 619 424 211
168	(2)	8 619 414 502
169	(2)	8 619 414 401
170	(2)	8 619 414 402
171	(2)	8 619 414 403
173	(2)	8 619 414 518

Explosionszeichnung CR-8800 H (2) Laufwerkteile 2
Exploded View CR-8800 H (2) VTR Mechanism Section 2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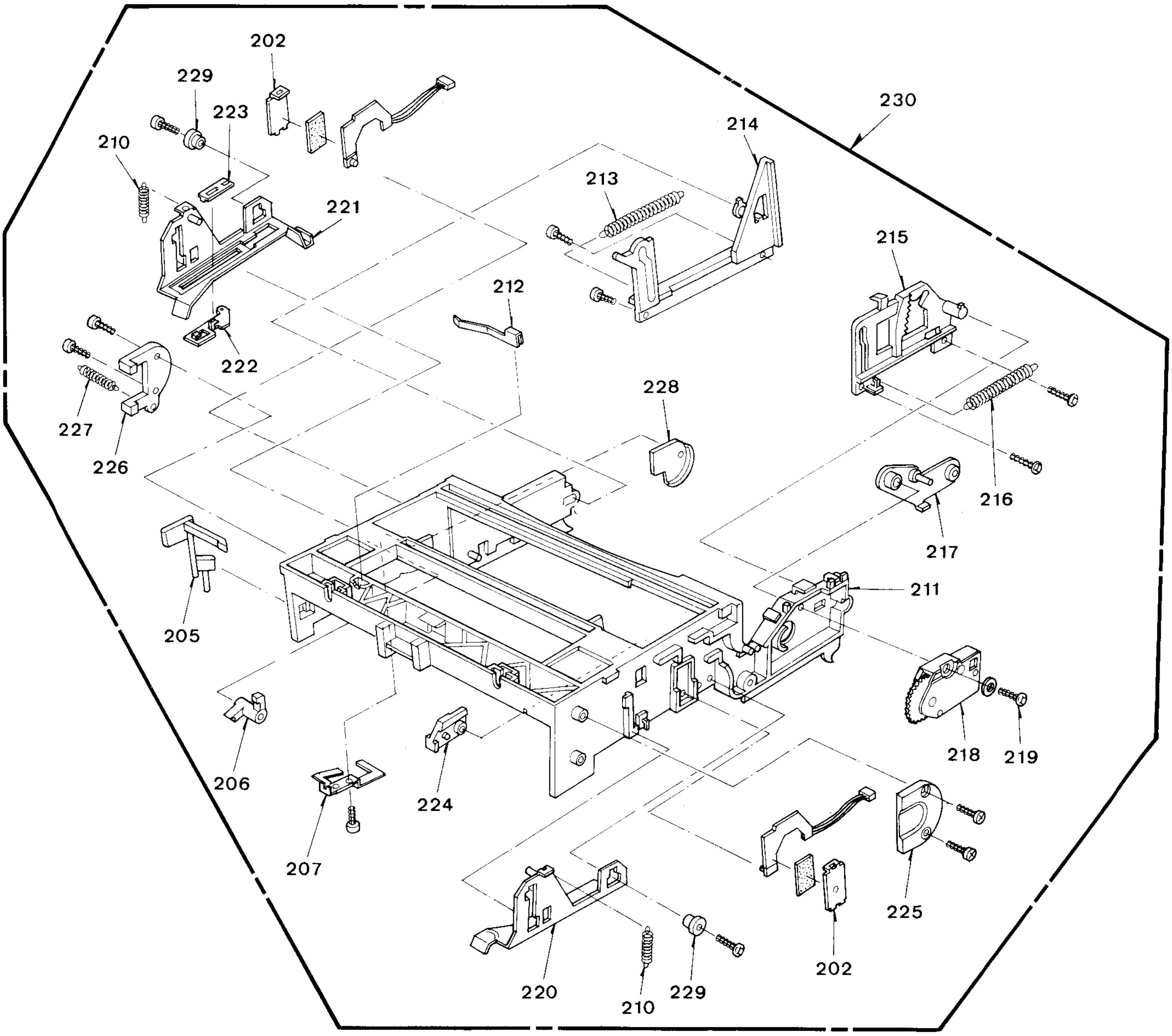
Explosionszeichnung CR-8800 H (3) Kassettenschacht
Exploded View CR-8800 H (3) Cassette Compartment Section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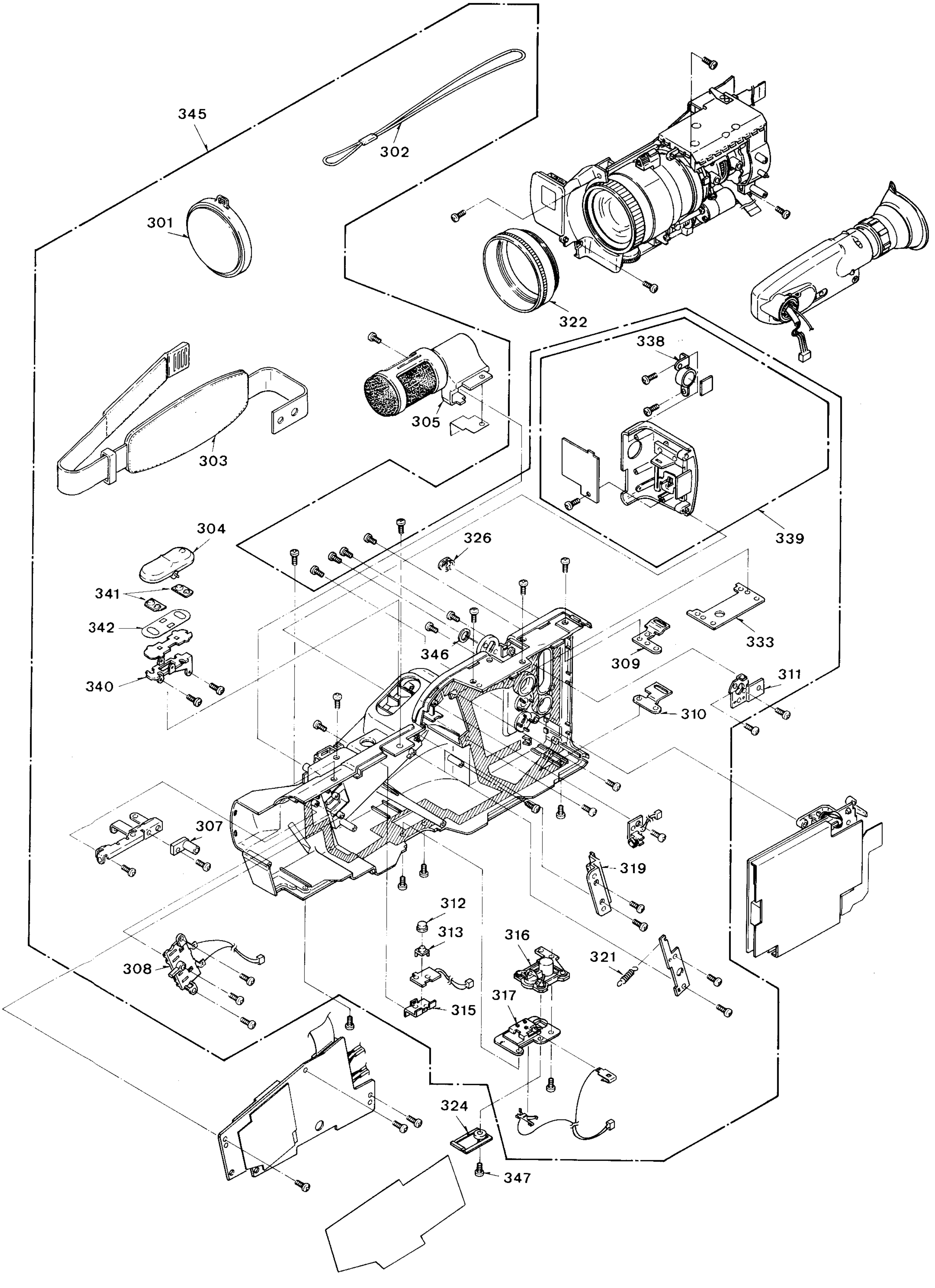
Lfd. Nr. Item no.	(Explo.) (Explo.)	Bestell-Nr. Part no.
202	(3)	8 619 424 501
205	(3)	8 619 414 175
206	(3)	8 619 414 176
207	(3)	8 619 414 177
210	(3)	8 619 414 624
211	(3)	8 619 408 073
212	(3)	8 619 414 625
213	(3)	8 619 414 626
214	(3)	8 619 414 178
215	(3)	8 619 414 179
216	(3)	8 619 414 626
217	(3)	8 619 414 180
218	(3)	8 619 414 181
219	(3)	8 619 414 521
220	(3)	8 619 414 182
221	(3)	8 619 414 183
222	(3)	8 619 414 184
223	(3)	8 619 414 185
224	(3)	8 619 414 186
225	(3)	8 619 416 133
226	(3)	8 619 416 134
227	(3)	8 619 414 627
228	(3)	8 619 414 189
229	(3)	8 619 414 342
230	(3)	8 619 408 074

Explosionszeichnung CR-8800 H (4) Chassis- und Gehäuseteile
Exploded View CR-8800 H (4) Frame and Casing Parts Section



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Lfd. Nr.	(Explo.)	Bestell-Nr.
Item no.	(Explo.)	Part no.
301	(4)	8 619 580 170
302	(4)	8 619 427 805
303	(4)	8 619 580 259
304	(4)	8 619 510 059
305	(4)	8 619 590 506
307	(4)	8 619 580 169
308	(4)	8 619 580 261
309	(4)	8 619 510 126
310	(4)	8 619 580 262
311	(4)	8 619 580 263
312	(4)	8 619 510 002
313	(4)	8 619 424 212
315	(4)	8 619 580 264
316	(4)	8 619 418 151
317	(4)	8 619 580 276
319	(4)	8 619 580 277
321	(4)	8 619 510 658
322	(4)	8 619 510 414
324	(4)	8 619 500 008
325	(4)	8 619 418 146
326	(4)	8 619 418 903
327	(4)	8 619 415 117
328	(4)	8 619 580 266
329	(4)	8 619 415 608
330	(4)	8 619 580 267
331	(4)	8 619 580 268
333	(4)	8 619 510 124
335	(4)	8 619 580 275
338	(4)	8 619 580 274
339	(4)	8 619 580 270
340	(4)	8 619 580 271
341	(4)	8 619 428 216
342	(4)	8 619 590 001
344	(4)	8 619 580 272
345	(4)	8 619 580 273
346	(4)	8 619 510 376
347	(4)	8 619 510 521
348	(4)	8 619 590 775

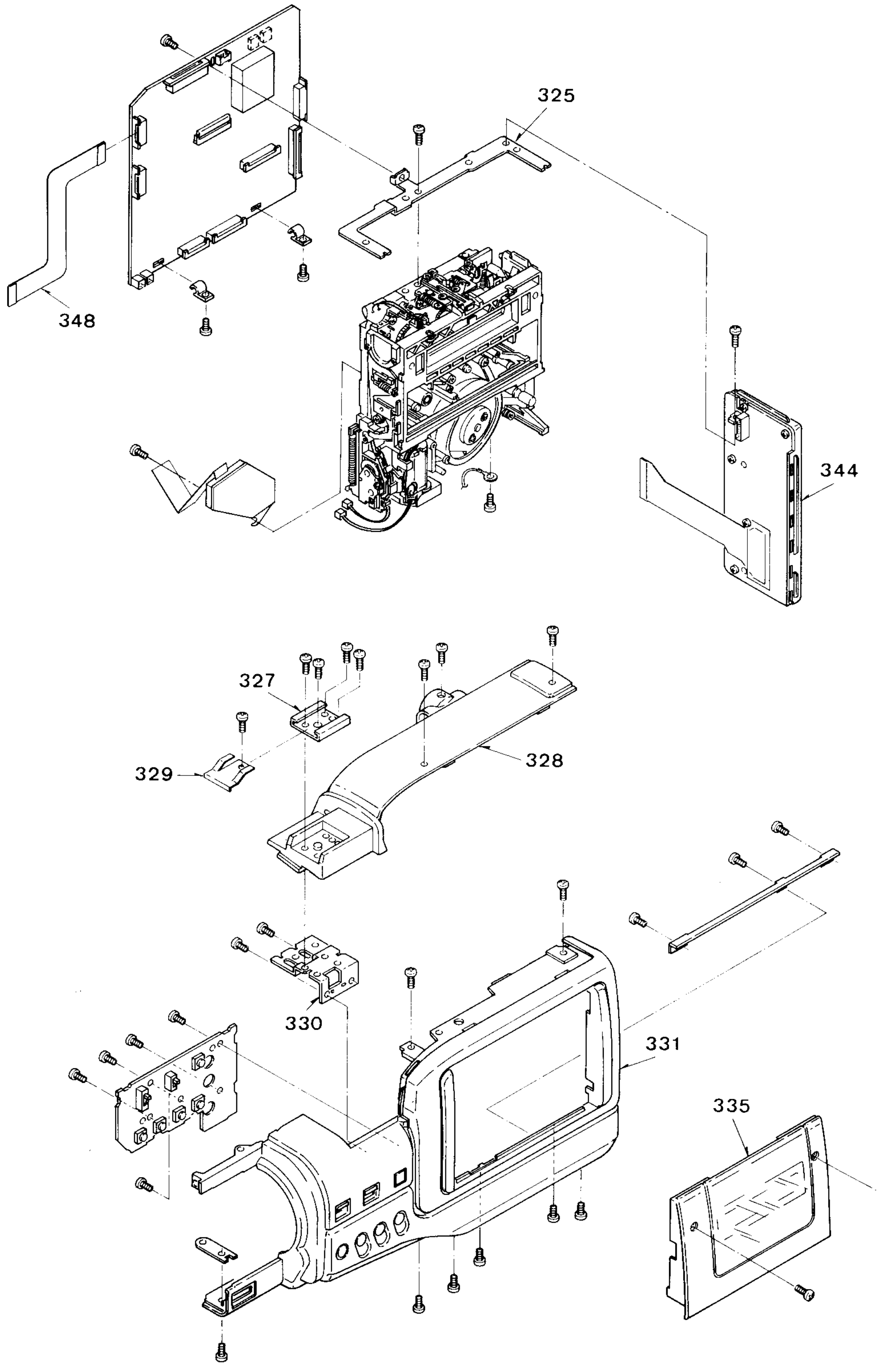
Hinweise:

- Das Gerät ist sehr kompakt gebaut und hat teilweise Verriegelungsklemmen anstelle von Befestigungsschrauben. Arbeiten Sie daher beim Service äußerst vorsichtig, damit diese Verriegelungsklemmen nicht abbrechen.
- Bevor das Folienkabel aus der Klemmfassung gezogen wird, muß diese entriegelt werden.

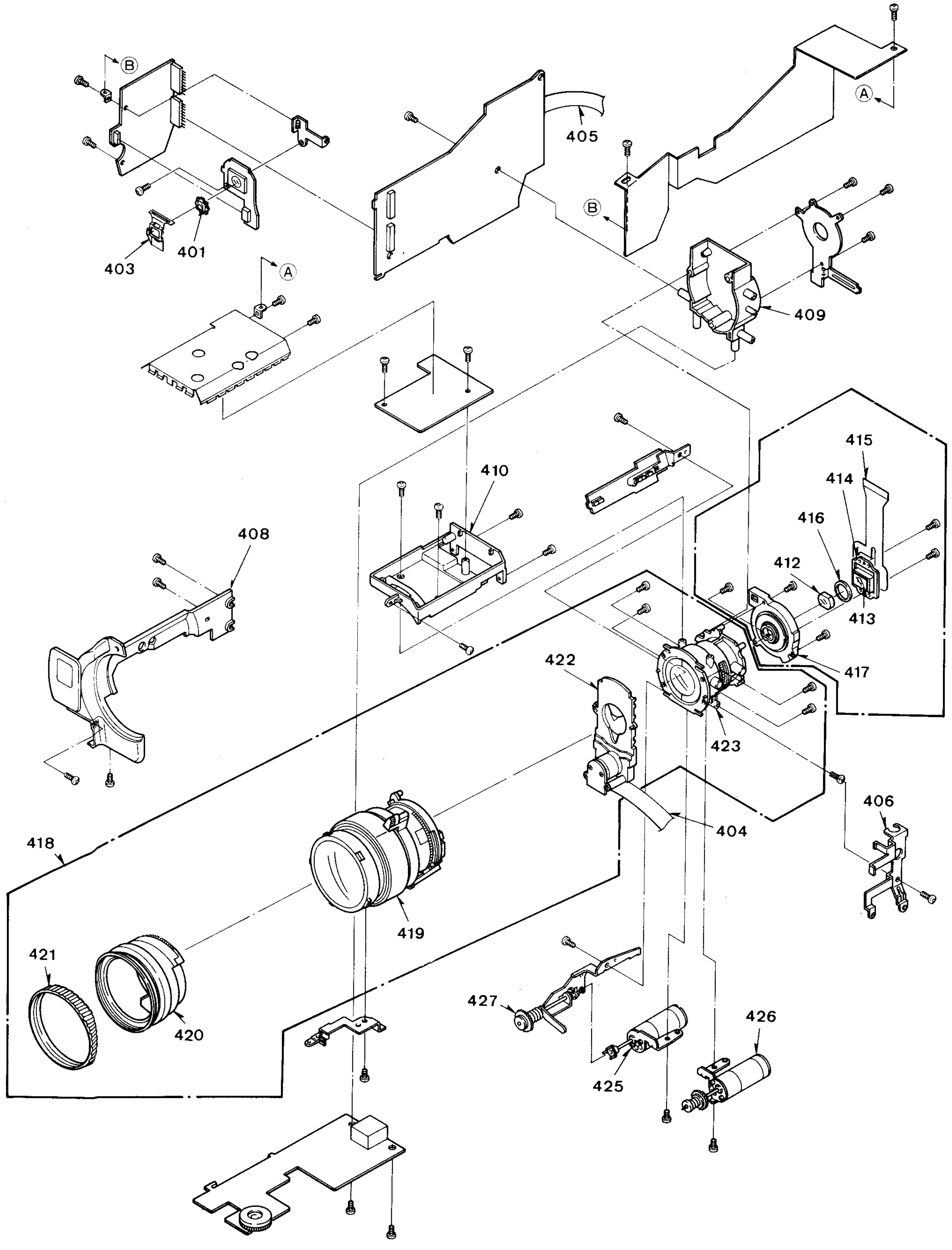
Notes:

- This unit is very compact and has partly been fitted with locking portions instead of fixing screws. When removing the cabinet, work with care so as not to break the locking portions.
- Before pulling the flexible cable out of the clamping fixture this must be unlocked.

Explosionszeichnung CR-8800 H (4) Chassis- und Gehäuseteile (Fortsetzung)
Exploded View CR-8800 H (4) Frame and Casing Parts Section (Continued)



Explosionszeichnung CR-8800 H (5) Kamera- und Optikteile
Exploded View CR-8800 H (5) Camera Lens Section



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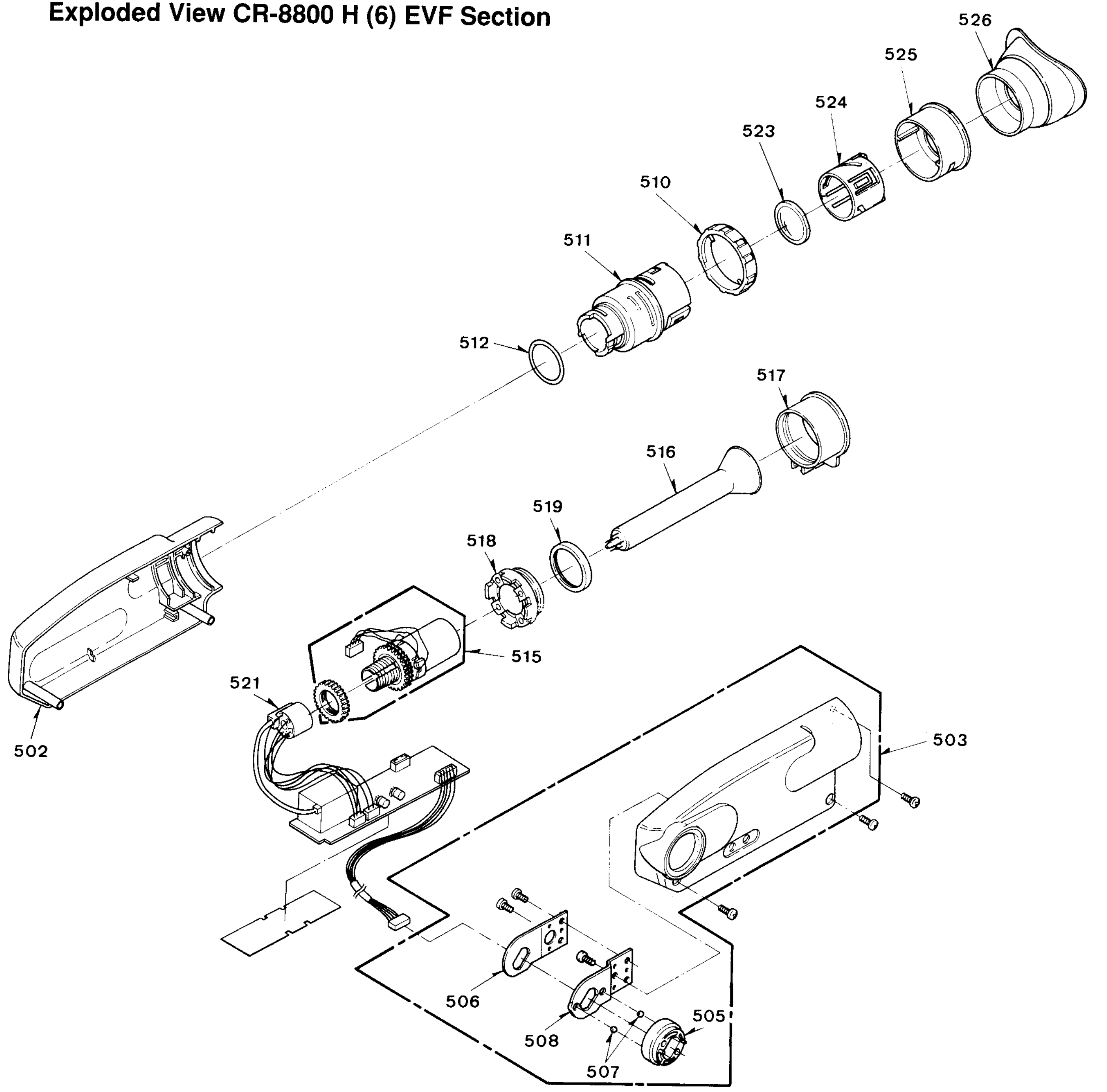
Explosionszeichnung CR-8800 H (6) Sucherteile
Exploded View CR-8800 H (6) EVF Section



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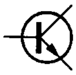
Lfd. Nr. Item no.	(Explo.) (Explo.)	Bestell-Nr. Part no.
401	(5)	8 619 418 705
403	(5)	8 619 510 629
404	(5)	8 619 590 747
405	(5)	8 619 590 776
406	(5)	8 619 510 385
408	(5)	8 619 580 256
409	(5)	8 619 580 173
410	(5)	8 619 510 389
412	(5)	8 619 510 710
413	(5)	8 619 580 513
414	(5)	8 619 416 148
415	(5)	8 619 590 749
416	(5)	8 619 510 415
417	(5)	8 619 428 400
418	(5)	8 619 510 711
419	(5)	8 619 510 712
420	(5)	8 619 510 417
421	(5)	8 619 510 416
422	(5)	8 619 510 718
423	(5)	8 619 580 174
425	(5)	8 619 520 404
426	(5)	8 619 520 405
427	(5)	8 619 580 258
502	(6)	8 619 580 192
503	(6)	8 619 580 193
505	(6)	8 619 510 063
506	(6)	8 619 510 626
507	(6)	8 619 510 516
508	(6)	8 619 510 366
510	(6)	8 619 510 708
511	(6)	8 619 510 065
512	(6)	8 619 417 407
515	(6)	8 619 530 090
516	(6)	8 619 580 515
517	(6)	8 619 580 194
518	(6)	8 619 418 167
519	(6)	8 619 418 906
521	(6)	8 619 520 630
523	(6)	8 619 417 700
524	(6)	8 619 510 365
525	(6)	8 619 510 339
526	(6)	8 619 510 026

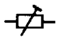
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
	Wichtige mech. Bauteile CR-8800 H **Important mechanical parts CR-8800 H**	
1	Kopftrommel kompl. DD cylinder unit	8 619 530 611
2	Kopfscheibe Upper rotary assembly	8 619 530 612
3	Capstanmotor Capstan motor	8 619 520 410
4	Einfädelmotor Threading motor	8 619 424 401
5	Zoommotor Zom motor	8 619 520 405
6	Fokusmotor Focus motor	8 619 520 404
7	Feuchtesensor (DEW) DEW sensor	8 619 424 500
8	Funktions-Wahlschalter Mode select switch	8 619 424 204
9	Mikrofon kompl. Microphone compl.	8 619 590 506
10	Sonnenblende Sunshade	8 619 510 414
11	Objektivkappe Lens cap	8 619 580 170
12	Schulterriemen Shoulder strap	8 619 590 826
13	AV-Ausgangskabel AV output cable	8 619 590 751
14	Stromversorgungskabel Power supply cable	8 619 497 712
15	S-Videokabel S Video cable	8 619 499 701
16	Audiokabel (Cinch) Audio cable (Cinch)	8 619 590 778
20	Folienkabel: Flexible cable:	
	Capstan - P 2002 (VWJ 0295)	8 619 496 708
	Capstan - Capstan (VWJ 0294)	8 619 496 709
	FP 306 - P6802 (VWJ09XW160TT)	8 619 580 555
	FP 302 - Iris unit (VWJ 0386)	8 619 590 747
	FP 201 - CCD unit (VWJ 0400)	8 619 590 749
	P 4501 - P 6009 (VWJ 0441)	8 619 590 772
	P 5001 - P 3501 (VWJ 0471)	8 619 590 773
	P 6501 - P 6008 (VWJ 0439)	8 619 590 774
	P 6003 - P 6801 (VWJ 0440)	8 619 590 775
	P 3503 - FP 307 (VWJ 0442)	8 619 590 776
	Mech. - Mechanism (VEP 00Q16A)	8 619 590 851

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
	Prozeßplatine **Process C.B.A.**	
C 431	20 pF	8 943 995 061
C 613	20 pF	8 943 995 061
D 301	MA 110	8 945 405 811
D 302	MA 110	8 945 405 811
D 303	MA 110	8 945 405 811
D 402	MA 110	8 945 405 811
D 403	MA 141 WK	8 945 405 817
D 404	MA 728	8 945 405 816
D 405	MA 3047 M	8 945 405 815
D 406	MA 334 B	8 945 421 445
D 407	MA 110	8 945 405 811
D 408	MA 110	8 945 405 811
D 409	MA 110	8 945 405 811
D 410	MA 110	8 945 405 811
D 412	MA 3051H	8 945 406 163
D 413	MA 110	8 945 405 811
D 501	MA 110	8 945 405 811
D 502	MA 141WA	8 945 405 814
D 503	MA 728	8 945 405 816
D 505	MA 110	8 945 405 811
FL 1		8 619 530 063
FL 301		8 619 530 057
FL 303		8 619 530 058
FL 304		8 619 530 059
FL 305		8 619 530 060
FL 306		8 619 530 061
FL 401		8 619 438 034
FL 402		8 619 530 062
FL 403		8 619 530 063
IC 1	AN 2154 FAP	8 945 902 470
IC 1	MN 3827 S	8 945 903 164
IC 2	MN 3828 S	8 925 900 513
IC 2	UPD 358 G 2	8 945 900 886
IC 3	UPC 324 G 2	8 945 901 937
IC 302	VEFH 09 B	8 925 900 515
IC 306	VEFH 11 B	8 925 900 516
IC 307	TC 4 S 66 F-TE 85 L	8 925 900 238
IC 308	TC 4 S 66 F-TE 85 L	8 925 900 238
IC 309	TC 4 S 66 F-TE 85 L	8 925 900 238
IC 310	TC 4 S 66 F-TE 85 L	8 925 900 238
IC 311	TC 4 S 66 F-TE 85 L	8 925 900 238
IC 312	TC 4 S 66 F-TE 85 L	8 925 900 238
IC 313	TC 4 S 66 F-TE 85 L	8 925 900 238
IC 401	AN 2254 FAP	8 945 902 471
IC 402	UPD 4094 BG	8 945 902 105
IC 403	MN 67606 AP	8 925 900 508
IC 404	MN 67607 PAS	8 925 900 509
IC 501	RC 4558 M	8 945 902 408
IC 502	MC 14052 BF	8 925 900 510
IC 503	LM 324 ML	8 925 900 511
IC 504	LM 324 ML	8 925 900 511
IC 505	LM 358 PS	8 945 903 002

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 506	LM 358 PS	8 945 903 002
IC 603	MC 14053 BF	8 945 902 753
IC 604	MN 3828 S	8 925 900 513
IC 605	MC 14053 BF	8 945 902 753
IC 608	TC 4 S 66 F-TE 85 L	8 925 900 238



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
Q 1	2 SD 1819	8 945 705 642
Q 1	2 SB 1218 A	8 945 705 646
Q 2	2 SC 4176	8 945 705 645
Q 2	XN 4401	8 945 705 893
Q 3	2 SB 1218 A	8 945 705 646
Q 3	UN 221 F	8 945 706 135
Q 4	2 SD 1819	8 945 705 642
Q 4	UN 221 F	8 945 706 135
Q 5	XN 4401	8 945 705 893
Q 6	2 SD 1819	8 945 705 642
Q 301	2 SD 1819	8 945 705 642
Q 302	2 SC 3931	8 945 705 648
Q 303	2 SA 1532	8 945 705 650
Q 304	2 SK 198	8 925 705 103
Q 305	2 SK 198	8 925 705 103
Q 306	2 SK 198	8 925 705 103
Q 308	XN 4501	8 945 705 894
Q 309	UN 5112	8 945 705 664
Q 313	UN 5215	8 945 705 666
Q 314	2 SB 1218 A	8 945 705 646
Q 315	2 SB 1218A	8 945 705 646
Q 317	2 SA 1532	8 945 705 650
Q 318	UN 5212	8 945 705 663
Q 320	2 SK 198	8 925 705 103
Q 331	2 SC 3931	8 945 705 648
Q 332	2 SC 3931	8 945 705 648
Q 402	XN 4601	8 945 705 713
Q 404	UN 5212	8 945 705 663
Q 405	XN 4401	8 945 705 893
Q 406	XN 4501	8 945 705 894
Q 409	XN 4608	8 945 705 909
Q 410	UN 5212	8 945 705 663
Q 412	UN 5212	8 945 705 663
Q 503	2 SD 1819	8 945 705 642
Q 504	XN 4501	8 945 705 894
Q 505	XN 4601	8 945 705 713
Q 506	2 SD 1819	8 945 705 642
Q 507	2 SD 1819	8 945 705 642
Q 508	XN 4401	8 945 705 893
Q 604	2 SB 1218 A	8 945 705 646
Q 605	XN 4501	8 945 705 894
Q 608	2 SB 1218 A	8 945 705 646
Q 609	XN 4401	8 945 705 893
Q 610	XN 4501	8 945 705 894
Q 611	XN 4401	8 945 705 893
Q 612	XN 4401	8 945 705 893
Q 613	2 SA 1532	8 945 705 650
Q 614	2 SC 3931	8 945 705 648
Q 615	2 SC 3931	8 945 705 648
Q 616	2 SC 3931	8 945 705 648
Q 617	XN 4501	8 945 705 894
Q 620	XN 1215	8 945 705 731
Q 621	XN 1215	8 945 705 731
Q 622	2 SD 1819	8 945 705 642
Q 625	2 SA 1532	8 945 705 650



Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
VR 301	10 kΩ	8 941 599 641
VR 304	50 kΩ	8 941 599 643
VR 305	20 kΩ	8 941 599 642
VR 306	20 kΩ	8 941 599 642
VR 307	20 kΩ	8 941 599 642
VR 308	20 kΩ	8 941 599 642
VR 309	20 kΩ	8 941 599 642
VR 310	20 kΩ	8 941 599 642
VR 311	10 kΩ	8 941 599 641
VR 312	10 kΩ	8 941 599 641
VR 313	5 kΩ	8 941 599 645
VR 314	5 kΩ	8 941 599 645
VR 315	1 kΩ	8 941 599 644
VR 316	1 kΩ	8 941 599 644
VR 317	10 kΩ	8 941 599 641
VR 320	10 kΩ	8 941 599 641
VR 322	50 kΩ	8 941 599 643
VR 327	10 kΩ	8 941 599 641
VR 331	10 kΩ	8 941 599 641
VR 332	20 kΩ	8 941 599 642
VR 333	5 kΩ	8 941 599 645
VR 334	100 kΩ	8 941 599 704
VR 523	50 kΩ	8 941 599 643
VR 525	10 kΩ	8 941 599 641
VR 526	10 kΩ	8 941 599 641
VR 527	50 kΩ	8 941 599 643
VR 528	10 kΩ	8 941 599 641
VR 529	10 kΩ	8 941 599 641
VR 530	5 kΩ	8 941 599 645
VR 531	5 kΩ	8 941 599 645
VR 532	5 kΩ	8 941 599 645
VR 533	20 kΩ	8 941 599 642

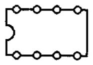
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
X 401		8 946 193 332
X 402		8 946 193 333

CCD-Sensorplatine
CCD Sensor C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
D 201	MA 110	8 945 405 811
D 202	MA 728	8 945 405 816
D 203	MA 110	8 945 405 811

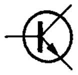
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
FL 201		8 619 530 056

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
FP 201		8 619 428 618

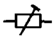


Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
IC 201	MN 5127-2	8 925 900 522
IC 202	MN 3107 CS	8 945 902 475
IC 203	MN 3107 CS	8 945 902 475
IC 204	AN 2012 S	8 945 902 476

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.



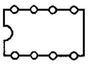
Q 201	2 SD 1819	8 945 705 642
Q 202	2 SC 3930	8 945 705 643
Q 203	2 SD 1819	8 945 705 642
Q 204	2 SD 1819	8 945 705 642
Q 205	2 SD 1819	8 945 705 642



VR 201	200 kΩ	8 941 599 646
VR 202	50 kΩ	8 941 599 643
VR 203	20 kΩ	8 941 599 642

AWT-Platine AWT C.B.A.

8 619 530 597



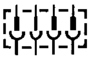
IC 651	M 51096 AUK	8 945 902 478

Autofokus-Platine Auto Focus C.B.A.

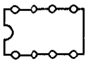
C 737	20 pF	8 943 995 061

D 702	MA 141 A	8 945 405 810
D 703	1 SS 250	8 945 405 818
D 704	1 SS 250	8 945 405 818

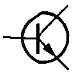
FL 701		8 619 436 028
FL 702		8 619 436 029
FL 703		8 619 436 030
FL 704		8 619 436 031
FL 705		8 619 436 032



FP 701		8 619 520 622



IC 701	MN 15867 VFK4	8 925 900 505
IC 702	AN 2584 NFAP	8 945 902 480
IC 704	AN 6545 SP	8 925 900 506
IC 705	RC 3415 M	8 945 902 113
IC 706	AN 6664 S	8 925 900 507



Q 701	UN 2211	8 945 705 474

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
Q 704	2 SA 1255	8 945 705 652
Q 705	2 SC 3138	8 945 705 653
Q 706	2 SD 1819	8 945 705 642
Q 707	2 SD 1819	8 945 705 642
Q 708	2 SD 1483	8 945 706 075

T 701		8 619 436 203

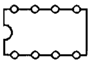
VR 701	50 kΩ.	8 941 599 768
VR 703	10 kΩ	8 941 599 641

X 701		8 946 193 259

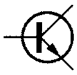
Mik.-Verstärkerplatine Mic. Amp. C.B.A.

8 619 590 493

D 4801	MA 3056	8 945 405 453



IC 4801	BA 3308 F	8 925 900 680



Q 4801	2 SC 2405	8 925 705 088
Q 4802	2 SC 2405	8 925 705 088

Kamera-Bedienteilplatine Camera Operation C.B.A.

8 619 590 494

SW 6801		8 619 520 242
SW 6802		8 619 520 241
SW 6803-07		8 619 426 206

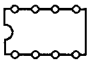
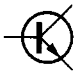
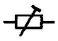
D 6801-06	MA 141K	8 945 405 813

Sucherplatine EVF C.B.A.

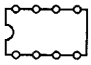
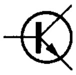
D 801	MA 141K	8 945 405 813
D 802	SFPL-52	8 925 405 518
D 803	AP 01 C	8 945 405 930

Ersatzteilliste

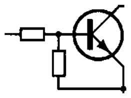
Spare Parts List

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
		
IC 801	AN 2514 S	8 945 903 053
		
Q 801	2 SB 1218 A	8 945 705 646
Q 802	2 SD 968A-S	8 925 705 374
Q 803	2 SA 1532	8 945 705 650
T 801		8 619 530 216
		
VR 801		8 941 599 648
VR 802	50 kΩ	8 941 599 643
VR 803		8 941 599 721
VR 804		8 941 599 722

Hauptplatine Main C.B.A.

1	Folienkabel Flexible cable (VWJ 0440)	8 619 590 775
D 1001	MA 701 A	8 945 405 570
D 1002	MA 701 A	8 945 405 570
D 1003	SFPB-56	8 945 406 261
D 1004	MA 141 K	8 945 405 813
D 1005	MA 141 WA	8 945 405 814
D 1007	MA 3075 H	8 945 421 307
D 1008	MA 141 K	8 945 405 813
D 1009	MA 141 K	8 945 405 813
D 1010	MA 141 K	8 945 405 813
D 1011	SFPB-56	8 945 406 261
D 1012	MA 141 K	8 945 405 813
D 1013	MA 3091 H	8 925 405 551
D 1014	MA 3091 H	8 925 405 551
D 2001	MA 143	8 945 405 822
D 2002	MA 143	8 945 405 822
D 2003	MA 141 WK	8 945 405 817
D 2004	MA 701 A	8 945 405 570
D 2005	MA 141 A	8 945 405 810
D 2006	MA 701 A	8 945 405 570
D 2007	MA 141 K	8 945 405 813
D 2008	MA 141 WK	8 945 405 817
D 3501	MA 141 WK	8 945 405 817
D 4001	MA 141 K	8 945 405 813
D 6002	MA 141 K	8 945 405 813
D 6004	MA 141 K	8 945 405 813
D 6005	MA 141 A	8 945 405 810
D 6007	MA 141 WA	8 945 405 814
D 6009	MA 141 WA	8 945 405 814
D 6010	MA 159	8 945 405 812
D 6012	MA 159	8 945 405 812
D 6014	MA 143	8 945 405 822
D 6015	MA 159	8 945 405 812
D 6016	MA 159	8 945 405 812
D 6017	MA 141 K	8 945 405 813
D 6019	MA 141 K	8 945 405 813
D 6020	MA 141 WA	8 945 405 814
D 6022	MA 141 K	8 945 405 813
D 6023	MA 141 WK	8 945 405 817
D 6025	MA 141 WK	8 945 405 817
D 6026	MA 141K	8 945 405 813
FL 2001		8 619 436 035
FL 3501		8 619 530 253
FL 4001		8 619 438 040
		
IC 1001	BA 6130 L	8 945 901 436
IC 1002	AN 1358 S	8 945 901 391
IC 1003	AN 6914 S	8 905 957 241
IC 2001	BA 6431 F	8 945 902 059
IC 2002	AN 1358 S	8 945 901 391
IC 2003	AN 6914 S	8 905 957 241
IC 2004	AN 3911 S	8 945 901 430
IC 2005	MN 6181 V 8 DS	8 945 901 445
IC 2006	MN 4069 UBS	8 945 901 481
IC 2007	AN 6388 S	8 945 901 433
IC 2008	MN 4053 BS	8 945 900 937
IC 2009	UPD 6161 G 802	8 945 902 062
IC 2010	BA 226 F	8 945 902 063
IC 2011	AN 3911 S	8 945 901 430
IC 2012	DN 819	8 905 956 092
IC 3501	LA 3170 W.W. AN 3218 S	8 945 901 425
IC 3502	MN 6170 AS	8 945 901 443
IC 3503	AN 3396 S	8 925 900 684
IC 4001	AN 6391 NS	8 945 901 434
IC 4002	AN 6297 S	8 945 901 431
IC 6001	UPD 6145 G 618 A	8 925 900 686
IC 6002	AN 6914 S	8 905 957 241
IC 6003	S 3500 A 3	8 925 900 503
IC 6004	UPD 4094 BG	8 945 902 105
IC 6005	AN 1358 S	8 945 901 391
IC 6006	UPD 75108 A 585	8 925 900 700
IC 6007	UPD 4094 BG	8 945 902 105
IC 6008	MN 4021 BS	8 925 900 701
IC 6009	S 81250 HGRD	8 945 902 104
		
Q 1001	2 SB 1073	8 945 706 117
Q 1002	2 SB 1073	8 945 706 117
Q 1003	2 SB 1219	8 945 705 647
Q 1004	2 SD 2177 S	8 945 706 026
Q 1005	2 SD 1820	8 945 705 651
Q 1006	2 SB 970 X	8 945 705 911
Q 1007	2 SD 2177 S	8 945 706 026
Q 1008	2 SD 1328	8 925 820 031
Q 1009	2 SD 1819	8 945 705 642
Q 1010	2 SB 1218 A	8 945 705 646
Q 2001	2 SD 1819	8 945 705 642
Q 2002	2 SB 1218 A	8 945 705 646
Q 2003	2 SB 1218 A	8 945 705 646
Q 2004	2 SD 1819	8 945 705 642
Q 2005	2 SD 1819	8 945 705 642
Q 2006	2 SB 956	8 925 705 085
Q 2007	2 SB 956	8 925 705 085
Q 2008	2 SD 1819	8 945 705 642
Q 3501	2 SD 1819	8 945 705 642

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
Q 3503	2 SD 1819	8 945 705 642
Q 3504	2 SD 1819	8 945 705 642
Q 4001	2 SD 1819	8 945 705 642
Q 4005	2 SA 1531	8 945 705 657
Q 4006	2 SC 3929	8 945 705 658
Q 4007	2 SC 3931	8 945 705 648
Q 6001	2 SD 874	8 925 705 092
Q 6002	2 SB 1172	8 945 705 435
Q 6003	FMW 1	8 945 705 915
Q 6004	2 SB 956	8 925 705 085
Q 6005	2 SB 956	8 925 705 085
Q 6006	2 SD 1119	8 945 705 437
Q 6007	2 SD 1119	8 945 705 437
Q 6008	2 SD 1819	8 945 705 642
Q 6010	2 SD 1819	8 945 705 642
Q 6011	2 SB 970 X	8 945 705 911
Q 6012	2 SB 970 X	8 945 705 911
Q 6013	2 SB 970 X	8 945 705 911
Q 6014	2 SB 970 X	8 945 705 911
Q 6015	2 SB 970 X	8 945 705 911
Q 6016	2 SB 970 X	8 945 705 911
Q 6017	2 SB 956	8 925 705 085
Q 6018	2 SD 1819	8 945 705 642
Q 6019	2 SB 970 X	8 945 705 911
Q 6020	2 SC 3931	8 945 705 648



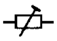
QR 1001	GA 1 L 4 M	8 945 705 729
QR 1002	GA 1 L 4 M	8 945 705 729
QR 1003	GA 1 L 4 M	8 945 705 729
QR 2001	GN 1 A 4 M	8 945 705 779
QR 2002	GN 1 L 4 Z	8 945 705 913
QR 2003	GN 1 L 4 Z	8 945 705 913
QR 2004	GA 1 L 4 M	8 945 705 729
QR 2005	GA 1 A 4 M	8 945 705 914
QR 2006	GA 1 F 4 M	8 945 705 730
QR 2007	GN 1 F 4 M	8 945 705 781
QR 3501	GN 1 L 4 M	8 945 705 733
QR 3502	FMG 2	8 945 705 917
QR 3503	FMS 1	8 945 705 926
QR 3504	GA 1 L 4 M	8 945 705 729
QR 6001	GA 1 F 4 Z	8 945 705 784
QR 6002	FMW 1	8 945 705 915
QR 6003	GN 1 L 4 M	8 945 705 733
QR 6004	GA 1 F 4 Z	8 945 705 784
QR 6005	GA 1 F 4 Z	8 945 705 784
QR 6006	GA 1 F 4 Z	8 945 705 784
QR 6007	GA 1 F 4 Z	8 945 705 784
QR 6008	GA 1 L 4 M	8 945 705 729
QR 6009	GA 1 L 4 M	8 945 705 729
QR 6010	FMA 4	8 945 705 959
QR 6011	XN 6501	8 945 705 668
QR 6012	GA 1 L 4 M	8 945 705 729
QR 6013	GA 1 L 4 M	8 945 705 729
QR 6014	GA 1 L 4 M	8 945 705 729
QR 6015	GA 1 A 4 M	8 945 705 914
QR 6016	GA 1 A 4 Z	8 945 705 916
QR 6017	GA 1 L 4 M	8 945 705 729
QR 6018	GA 1 L 4 M	8 945 705 729
QR 6019	GA 1 A 4 Z	8 945 705 916
QR 6020	GA 1 F 4 M	8 945 705 730
QR 6021	GA 1 L 4 M	8 945 705 729
QR 6022	GA 1 L 4 L	8 945 705 895
QR 6023	GA 1 L 4 M	8 945 705 729
QR 6024	GN 1 F 4 Z	8 945 705 780
QR 6025	GA 1 F 4 Z	8 945 705 784

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
QR 6026	GA 1 L 4 M	8 945 705 729
QR 6027	GA 1 L 4 M	8 945 705 729
QR 6028	GA 1 L 4 M	8 945 705 729
QR 6029	GA 1 F 4 Z	8 945 705 784
QR 6030	GN 1 A 4 Z	8 945 705 734

R 1045	0,025 Ω	8 619 486 001

SW 6001		8 619 427 215
SW 6002		8 619 427 215

T 1001		8 619 436 205
T 1002		8 619 530 223

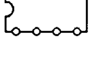


VR 1001	500 Ω	8 941 599 705
VR 1002	500 Ω	8 941 599 705
VR 1003	100 kΩ	8 941 599 244
VR 1004	200 kΩ	8 941 599 649
VR 2001	100 kΩ	8 941 599 704
VR 2004	1 kΩ	8 941 599 644
VR 4001	2 kΩ	8 941 599 703
VR 4002	2 kΩ	8 941 599 703
VR 4003	20 kΩ	8 941 599 642
VR 6001	10 kΩ	8 941 599 641

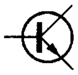
X 1001		8 946 193 126
X 6001		8 946 193 259
X 6002		8 946 193 188
X 6003		8 946 193 191

Kopfverstärker-Platine
Head Amplifier C.B.A.

1	Folienkabel Flexible cable (VWJ 0471)	8 619 590 773



IC 5001	AN 3346 FAS	8 945 903 165
IC 5002	AN 3346 FAS	8 945 903 165
IC 5003	M 52055 FP	8 945 902 337

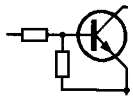


Q 5001	2 SB 1218 A	8 945 705 646
Q 5002	2 SB 1218 A	8 945 705 646
Q 5003	2 SA 1175 F	8 925 705 087
Q 5004	2 SA 812	8 945 705 433
Q 5005	2 SD 1323-R	8 925 705 417

Ersatzteilliste

Spare Parts List

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.



Position	Bezeichnung	Bestell-Nr.
QR 5001	GA 1 F 4 M	8 945 705 730

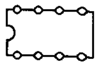
Luminanz- und Farbteilplatine
Luminance and Chrominance C.B.A.

Position	Bezeichnung	Bestell-Nr.
1	Buchsenplatte Jack board	8 619 580 246
2	Folienkabel Flexible cable (VWJ 0439)	8 619 590 774

Position	Bezeichnung	Bestell-Nr.
D 3001	MA 141 K	8 945 405 813
D 3002	MA 141 A	8 945 405 810
D 3003	MA 141 K	8 945 405 813
D 3004	MA 141 K	8 945 405 813
D 3005	MA 141 K	8 945 405 813
D 6501	MA 141 K	8 945 405 813
D 6502	ERB 83-004	8 945 406 007
D 6503	MA 3091 H	8 925 405 551
D 6504	MA 3091 H	8 925 405 551
D 6505	MA 3091 H	8 925 405 551
D 6506	MA 3091 H	8 925 405 551
D 8001	MA 141 K	8 945 405 813
D 8002	MA 141 K	8 945 405 813

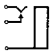
Position	Bezeichnung	Bestell-Nr.
DL 8001		8 619 580 310

Position	Bezeichnung	Bestell-Nr.
FL 3001		8 619 530 091
FL 3002		8 619 530 092
FL 3003		8 619 530 040
FL 3004		8 619 530 093
FL 3005		8 619 530 008
FL 3006		8 619 530 094
FL 3007		8 619 530 067
FL 3008		8 619 530 067
FL 8001		8 619 530 095
FL 8002		8 619 530 096
FL 8003		8 619 530 097
FL 8004		8 619 530 098
FL 8005		8 619 436 043

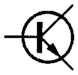


Position	Bezeichnung	Bestell-Nr.
IC 3001	M 52069 VP	8 945 903 170
IC 3002	AN 2265 FAP	8 945 903 171
IC 3003	TL 8809 F	8 945 903 061
IC 3004	MST 001 MS	8 945 902 110
IC 3005	M 52054 FP	8 945 902 494
IC 3006	AN 3580 SB	8 945 903 060
IC 8001	M 52097 FP	8 945 903 172
IC 8002	AN 3497 SB	8 925 900 690

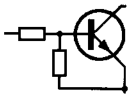
Position Position	Bezeichnung Designation	Bestell-Nr. Part no.



Position	Bezeichnung	Bestell-Nr.
J 6501	(DC-BUCHSE)	8 619 428 606
J 6502		8 619 520 631



Position	Bezeichnung	Bestell-Nr.
Q 3001	2 SB 1218 A	8 945 705 646
Q 3002	2 SC 3931	8 945 705 648
Q 3003	2 SC 3931	8 945 705 648
Q 3004	2 SC 3931	8 945 705 648
Q 3005	2 SC 3931	8 945 705 648
Q 3006	2 SC 3931	8 945 705 648
Q 3007	2 SC 3931	8 945 705 648
Q 3008	2 SB 1218 A	8 945 705 646
Q 3009	2 SC 3931	8 945 705 648
Q 3011	2 SD 1819	8 945 705 642
Q 3012	2 SC 3931	8 945 705 648
Q 3013	2 SD 1819	8 945 705 642
Q 3014	2 SC 3931	8 945 705 648
Q 3015	2 SC 3931	8 945 705 648
Q 3017	2 SD 1819	8 945 705 642
Q 3018	2 SD 1819	8 945 705 642
Q 3025	2 SD 1328	8 925 705 090
Q 3026	2 SC 3931	8 945 705 648
Q 3027	2 SC 3931	8 945 705 648
Q 3028	2 SD 1819	8 945 705 642
Q 8001	2 SB 1218 A	8 945 705 646
Q 8002	2 SD 1819	8 945 705 642
Q 8003	2 SC 3931	8 945 705 648
Q 8004	2 SC 3931	8 945 705 648
Q 8005	2 SC 3931	8 945 705 648
Q 8006	2 SD 1819	8 945 705 642



Position	Bezeichnung	Bestell-Nr.
QR 3001	GA 1 L 4 M	8 945 705 729
QR 3002	GA 1 L 4 M	8 945 705 729
QR 3004	GA 1 F 4 M	8 945 705 730
QR 3005	GA 1 L 4 M	8 945 705 729
QR 3006	GA 1 F 4 M	8 945 705 730
QR 3007	GA 1 F 4 M	8 945 705 730
QR 3008	GA 1 F 4 M	8 945 705 730
QR 3012	GA 1 F 4 M	8 945 705 730
QR 3014	GA 1 F 4 M	8 945 705 730
QR 3015	GA 1 F 4 M	8 945 705 730
QR 3016	GA 1 L 4 M	8 945 705 729
QR 3017	GA 1 F 4 M	8 945 705 730
QR 3018	GA 1 F 4 M	8 945 705 730
QR 3019	GA 1 L 4 M	8 945 705 729
QR 8001	GA 1 F 4 M	8 945 705 730
QR 8002	GA 1 L 4 M	8 945 705 729
QR 8003	GA 1 F 4 M	8 945 705 730
QR 8004	GA 1 L 4 M	8 945 705 729
QR 8005	GA 1 F 4 M	8 945 705 730
QR 8006	GA 1 L 4 M	8 945 705 729
QR 8007	GA 1 F 4 M	8 945 705 730
QR 8008	GA 1 F 4 M	8 945 705 730
QR 8009	GA 1 L 4 M	8 945 705 729
QR 8010	GA 1 L 4 M	8 945 705 729
QR 8011	GA 1 L 4 M	8 945 705 729
QR 8012	GA 1 L 4 M	8 945 705 729

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.

VC 8001	20 pF	8 943 995 061

VR 3001	20 kΩ	8 941 599 642
VR 3002	3 kΩ	8 941 599 789
VR 3003	2 kΩ	8 941 599 703
VR 3004	2 kΩ	8 941 599 703
VR 3005	1 kΩ	8 941 599 644
VR 3006	10 kΩ	8 941 599 641
VR 3007	50 kΩ	8 941 599 643
VR 3008	50 kΩ	8 941 599 643
VR 3010	5 kΩ	8 941 599 645
VR 3011	5 kΩ	8 941 599 645
VR 3013	5 kΩ	8 941 599 645
VR 3014	2 kΩ	8 941 599 703
VR 3015	10 kΩ	8 941 599 641
VR 3016	50 kΩ	8 941 599 643
VR 3017	2 kΩ	8 941 599 703
VR 3018	500 Ω	8 941 599 705
VR 8001	1 kΩ	8 941 599 644
VR 8002	10 kΩ	8 941 599 641
VR 8003	1 kΩ	8 941 599 644
VR 8004	500 kΩ	8 941 599 705

X 8001		8 946 193 372

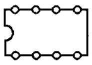
PCM-Tonplatine
PCM Audio C.B.A.

1	Folienkabel Flexible cable (VWJ 0441)	8 619 590 772

D 4501	MA 335	8 925 405 524
D 4502	MA 335	8 925 405 524
D 4503	MA 141 K	8 945 405 813
D 4504	MA 4030 M	8 925 405 550
D 4505	MA 141 K	8 945 405 813
D 4506	MA 157	8 945 405 824
D 4507	MA 157	8 945 405 824
D 4508	MA 141 K	8 945 405 813
D 4509	MA 141 K	8 945 405 813
D 4510	MA 141 K	8 945 405 813
D 4511	MA 143	8 945 405 822
D 4512	MA 141 WA	8 945 405 814
D 4513	MA 141 WA	8 945 405 814
D 4514	MA 141 K	8 945 405 813
D4515	MA 141 K	8 945 405 813

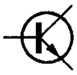
FL 4501		8 619 530 251
FL 4502		8 619 530 251
FL 4503		8 619 530 252
FL 4504		8 619 530 252
FL 4505		8 619 530 099

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.

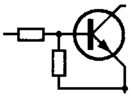


IC 4501	MN 6561 FS	8 945 903 166
IC 4502	MN 6560 FS	8 945 903 167
IC 4503	CXK 5816 M	8 945 903 168
IC 4504	CXK 5816 M	8 945 903 168
IC 4505	AN 1358 S	8 945 901 391
IC 4506	AN 6297 S	8 945 901 431
IC 4507	AN 6297 S	8 945 901 431
IC 4508	AN 1358 S	8 945 901 391
IC 4509	TC 9205 F	8 945 901 987
IC 4510	RC 3415 M	8 945 902 113
IC 4511	UPC 1541 GT	8 945 903 169

L 4513	15 mH	8 619 430 014
L 4514	15 mH	8 619 430 014



Q 4501	2 SA 1532	8 945 705 650
Q 4502	2 SC 3931	8 945 705 648
Q 4503	2 SB 1218 A	8 945 705 646
Q 4504	2 SD 1819	8 945 705 642
Q 4505	2 SB 1218 A	8 945 705 646
Q 4506	2 SD 1819	8 945 705 642
Q 4507	2 SD 1819	8 945 705 642
Q 4508	2 SD 1819	8 945 705 642
Q 4509	2 SC 3931	8 945 705 648
Q 4510	2 SC 3931	8 945 705 648
Q 4511	2 SD 1819	8 945 705 642
Q 4512	2 SC 3931	8 945 705 648
Q 4513	2 SC 3931	8 945 705 648
Q 4514	2 SD 1819	8 945 705 642
Q 4515	2 SC 3931	8 945 705 648
Q 4516	2 SC 3931	8 945 705 648
Q 4517	2 SD 1328	8 925 820 031
Q 4518	2 SD 1328	8 925 820 031



QR 4501	GA 1 F 4 M	8 945 705 730
QR 4502	GN 1 F 4 M	8 945 705 781
QR 4503	GA 1 F 4 M	8 945 705 730
QR 4504	GN 1 A 4 M	8 945 705 779
QR 4505	GA 1 F 4 M	8 945 705 730
QR 4506	GA 1 L 4 M	8 945 705 729
QR 4507	GA 1 F 4 M	8 945 705 730
QR 4508	GA 1 L 4 M	8 945 705 729
QR 4509	GA 1 L 4 M	8 945 705 729
QR 4510	GN 1 L 4 M	8 945 705 733
QR 4511	GA 1 L 4 M	8 945 705 729
QR 4512	GA 1 L 4 M	8 945 705 729
QR 4513	GA 1 L 4 M	8 945 705 729
QR 4515	GN 1 L 4 Z	8 945 705 913
QR 4516	GA 1 L 4 M	8 945 705 729

VC 4501	20 pF	8 943 995 061
VC 4502	20 pF	8 943 995 061

Position Position	Bezeichnung Designation		Bestell-Nr. Part no.
VR 4501	220	Ω	8 941 599 648
VR 4502	50	kΩ	8 941 599 643
VR 4503	20	kΩ	8 941 599 642
VR 4504	20	kΩ	8 941 599 642
VR 4505	10	kΩ	8 941 599 641
VR 4506	10	kΩ	8 941 599 641
VR 4507	2	kΩ	8 941 599 246
VR 4508	10	kΩ	8 941 599 641
X 4501			8 946 193 371

Capstan-Treiberplatine
Capstan Drive C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
1	Folienkabel (15-polig) Flexible cable (VWJ 0294)	8 619 496 709
2	Folienkabel (12-polig) Flexible cable (VWJ 0295)	8 619 496 708
3	Interface-Anschluß Interface terminal	8 619 510 809
4	Winkel Angle	8 619 416 150
D 2501	MA 157	8 945 405 824
D 2502	MA 157	8 945 405 824
D 2503	MA 157	8 945 405 824
IC 2501	AN 3890 FBS	8 925 900 674
IC 2502	UN 218 CU	8 925 900 675
IC 2503	AN 6914 S	8 905 957 241
IC 2504	AN 6552 S	8 945 900 877

Mech. Folienleiterbahn
Mechanism F.P.C. 8 619 590 851

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
1	Leuchtdiode (LN 59 KT) LED Diode (LN 59 KT)	8 945 406 260
2	Optokoppler (ON 2170) Opto coupler (ON 2170)	8 945 901 940
3	Funktions-Wahlschalter 1 (dreh) Mode select switch 1 (rotary)	8 619 424 204
4	Funktions-Wahlschalter 2 (schiebe) Mode select switch 2 (slide)	8 619 424 205
5	Cassetten-Erkennungsschalter Cassette detect switch	8 619 520 253
6	Halter Holder	8 619 580 247
7	Halter Holder	8 619 580 248

Start/Stop-Anschlußplatine
S/S Connection C.B.A. 8 619 590 852

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
SW 1601		8 619 421 205

Zoom-Tastenplatine
Zoom Sw C.B.A. 8 619 590 853

Titelgeneratorplatine
Char. Generator C.B.A. 8 619 590 854

LED-Anzeigeplatine
Tally LED C.B.A. 8 619 590 855

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
1	LED-Halter LED Holder	8 619 510 393
D 1621	LN 29 CALU	8 945 406 022

Start/Stop-Zusatzplatine
S/S Sub Rec. C.B.A. 8 619 590 856

Aufwickel-Sensorplatine
Take up Sensor C.B.A. 8 619 424 958

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
D 1	PN 158 KT	8 945 405 823

Abwickel-Sensorplatine
Supply Sensor C.B.A. 8 619 424 957

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
D 1	PN 158 KT	8 945 405 823

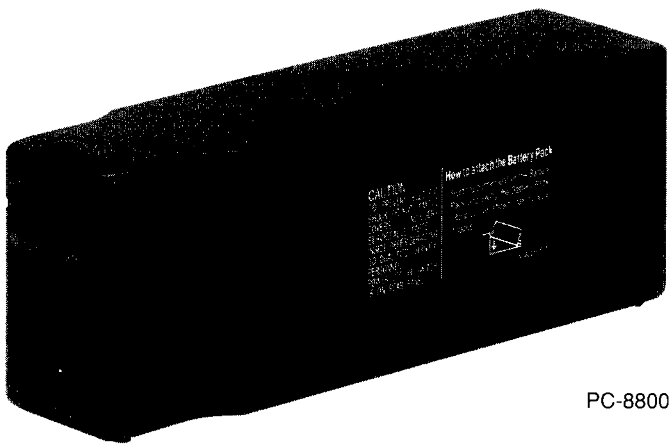
Hinweis:
Handelsübliche Kondensatoren und Widerstände sind in der Ersatzteilliste nicht aufgeführt. Wir bitten Sie, diese Teile im Fachhandel zu beziehen.

Note:
Capacitors and resistors usual in trade are not mentioned in the spare parts list. Kindly buy these parts from the specialized trade.

BLAUPUNKT
Bosch Telecom

Netzadapter / Power Adaptor
PC-8800 8 627 105 422

Kundendienstschrift • Service Manual



PC-8800

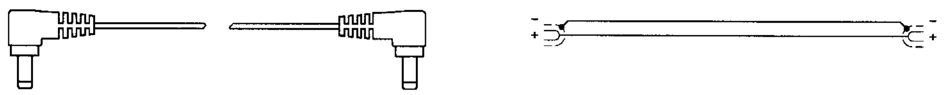
Technische Daten

Netzanschluß:	100-240 V, 50/60 Hz
Leistungsaufnahme:	ca. 22 W
Ausgangsspannung:	7,2 V/1,45 A (Camerarecorder) 7,2 V/1,1 A (Aufladen des Akkus)
Masse:	ca. 0,55 kg
Abmessungen:	66 (B) x 67 (H) x 192 (T) mm
Anschlußkabel:	

Specifications

Power Source:	100-240 V AC, 50/60 Hz
Power Consumption:	ca. 22 W
DC OUT:	7.2 V/1.45 A (Camcorder) 7.2 V/1.1 A (Battery pack charging)
Weight:	ca. 0.55 kg
Dimensions:	66 (W) x 67 (H) x 192 (D) mm
Connection Cable:	

1 Stück Stromversorgungskabel (5,5ø) / 1 pc. Power Supply Cable (5.5ø)



Dieser Netzadapter PC-8800 versorgt den Camerarecorder und dient außerdem zum Laden der entsprechenden Akkus.

This power adaptor PC-8800 supplies the camcorder and also serves for charging the corresponding battery pack.

Demontageanweisung

Flußdiagramm zur Demontage

Dieses Flußdiagramm zeigt die Reihenfolge, in der Gehäuseteile und Leiterplatten demontiert werden müssen, um diejenigen Teile zu erreichen, bei denen Service notwendig ist.
Beim Zusammenbau die Schritte in umgekehrter Reihenfolge durchführen.

Hinweise:

Das Gerät ist sehr kompakt gebaut und hat teilweise Verriegelungsklemmen anstelle von Befestigungsschrauben. Arbeiten Sie daher beim Service äußerst vorsichtig, damit diese Verriegelungsklemmen nicht abbrechen.

Dismounting instructions

Disassembly flowchart

This flowchart indicates disassembly steps of the cabinet parts and the P.C. Boards in order to find the items neccessary for servicing.
When reassembling, perform the steps in the reverse order.

Note:

This unit is compact and has partly been fitted with locking portions instead of fixing screws. When removing the cabinet, work with care so as not to break the locking portions.

Teil Nr. Part No.	Teil/Part	Fig.	Entfernen (entriegeln) Removal (unclamp)	Hinweis Note
①	Oberteil/Top Plate	Fig. 1 - 3	1 x S 1, 1 x S 2, 1 x S 3, 2 x S 4	
②	Seitenteil (L),Side Panel Unit (L)	Fig. 1	2 x L 1,	
③	Seitenteil (R),Side Panel Unit (R)	Fig. 2	—	
④	Halter für Netzschalter/Power SW Holder	Fig. 2	—	
⑤	Unterteil/Bottom Plate	Fig. 3	2 x L 2	
⑥	Vorderteil/Front Panel	Fig. 4	1 x L 3	
⑦	Hauptplatine/Main C.B.A.	Fig. 4	—	
⑧	LED-Platine/LED C.B.A.	Fig. 4	1 x L 4	

Erklärung der Abkürzungen: 2 x S 4 = 2 Schrauben S 4, 2 x L 1 = 2 Verriegelungen L 1
List of Abbrevations: 2 x S 4 = 2 Screws S 4, 2 x L 1 = 2 Locking Tabs L 1

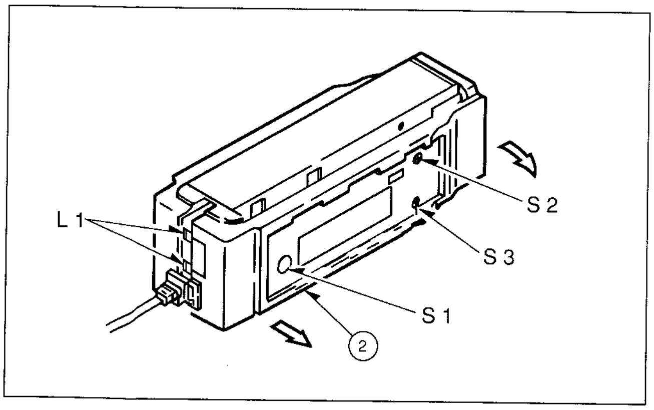
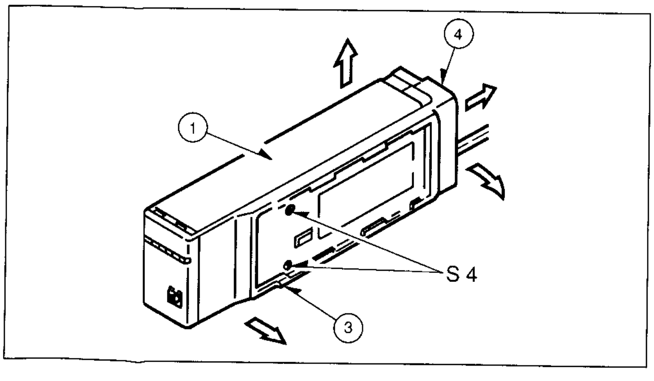


Fig. 1

Fig. 2



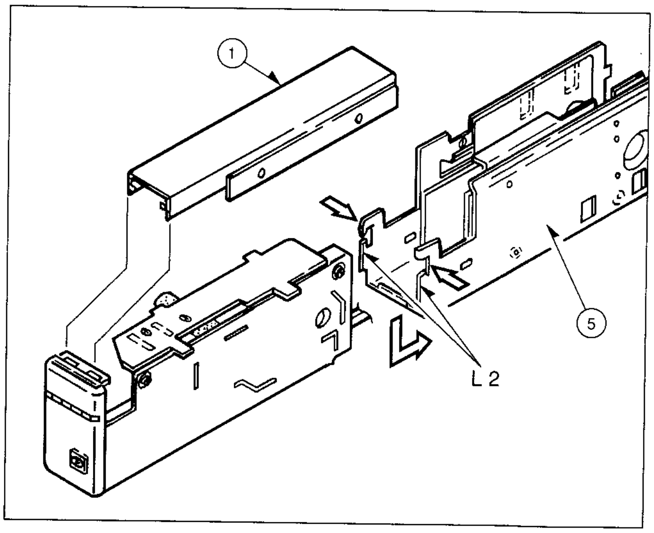
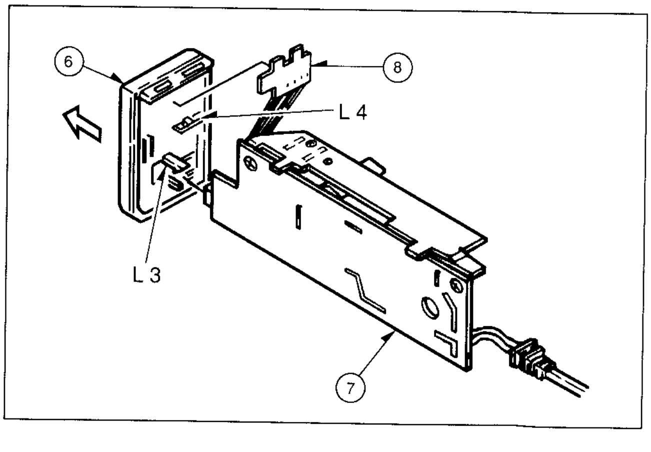
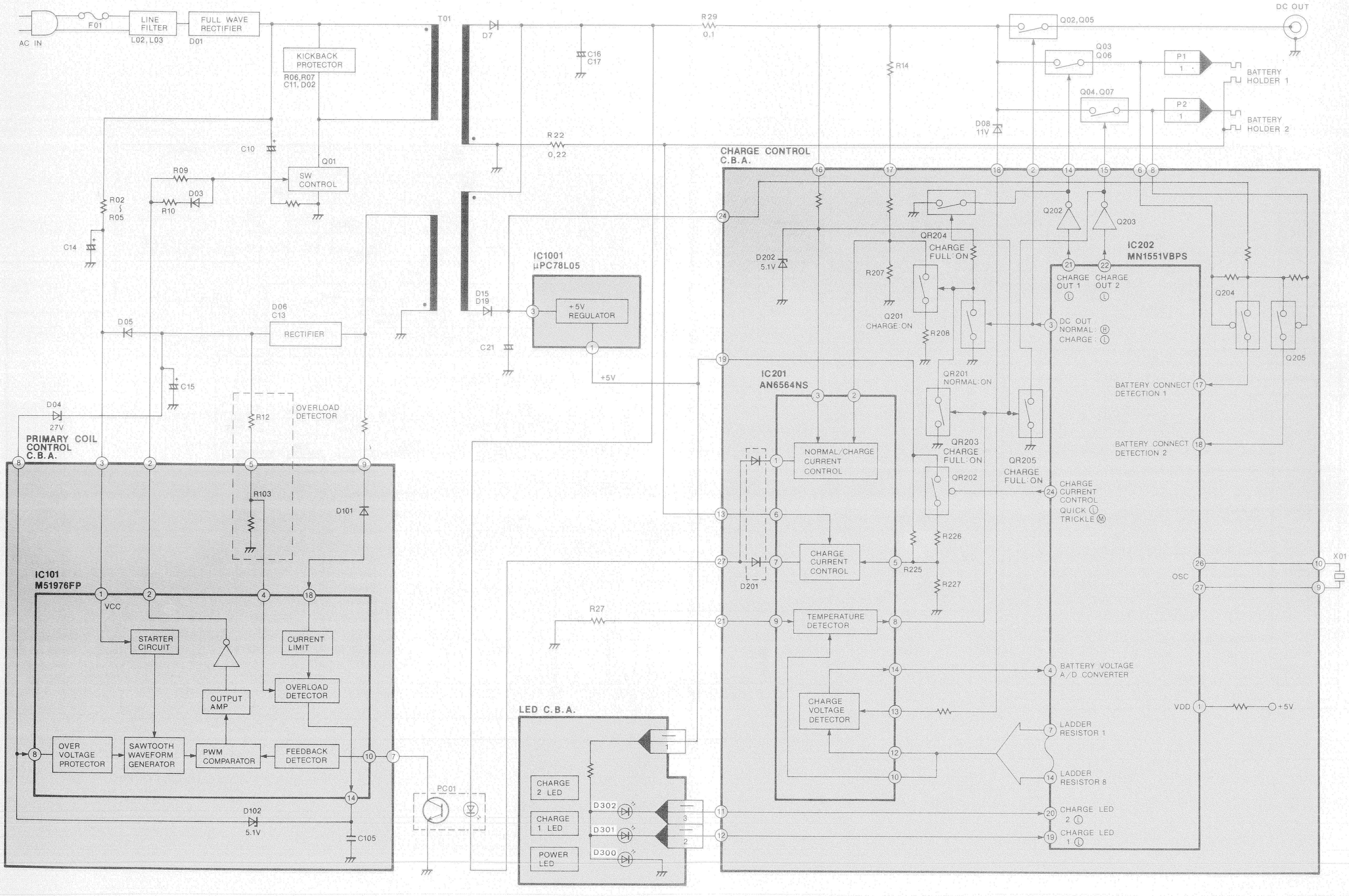


Fig. 3

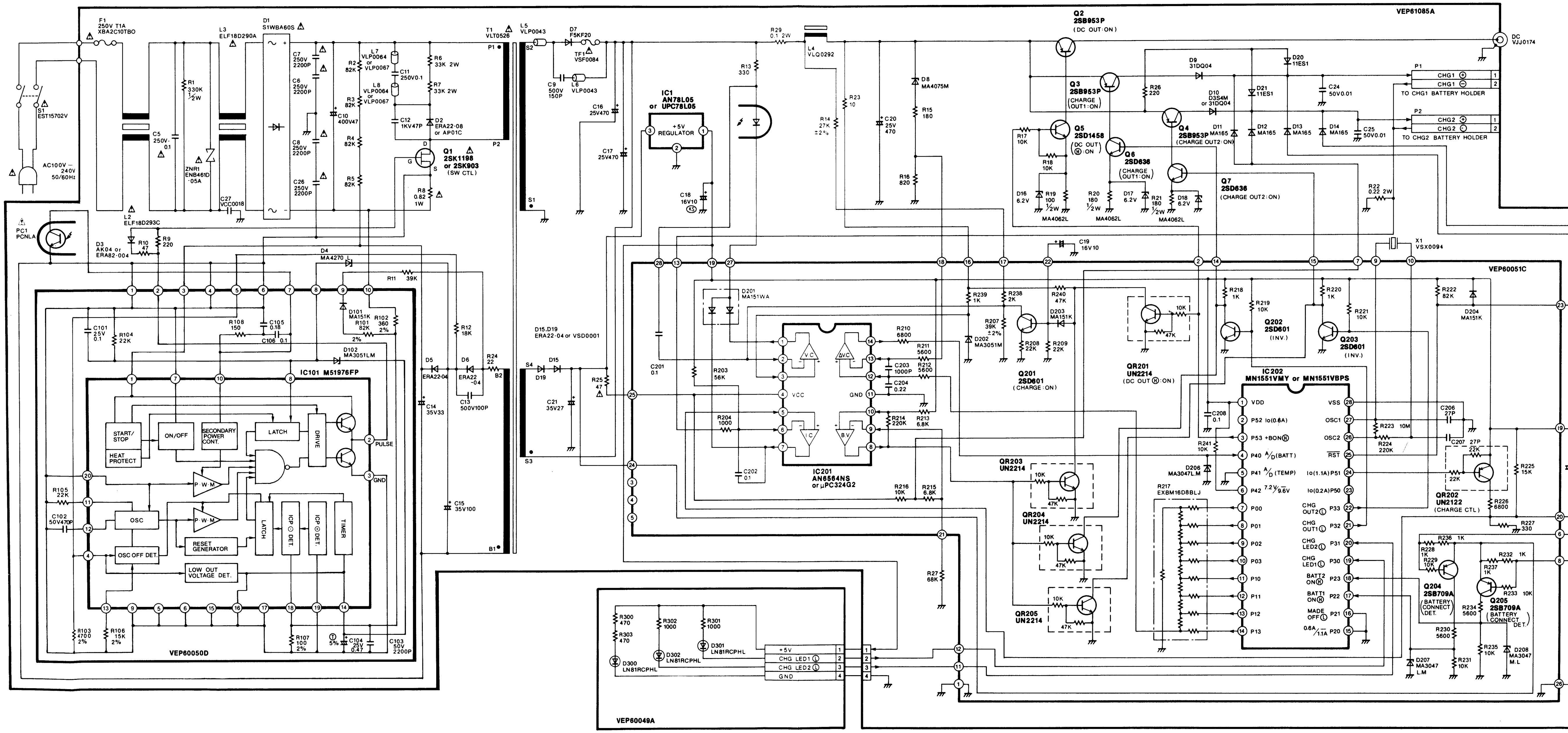
Fig. 4



Blockschaltbild des Netzadapters
Power Adaptor Block Diagram


AC IN
F01
LINE FILTER
L02, L03
FULL WAVE RECTIFIER
D01
KICKBACK PROTECTOR
R06, R07
C11, D02
T01
D7
C16
C17
R29
0,1
DC OUT
Q02, Q05
Q03
Q06
Q04, Q07
P1
P2
BATTERY HOLDER 1
BATTERY HOLDER 2
R14
D08
11V
R22
0,22
C10
Q01
SW CONTROL
R09
R10
D03
R02
R05
C14
D06
C13
RECTIFIER
D05
C15
D04
27V
R12
OVERLOAD DETECTOR
D15
D19
C21
IC1001
µPC78L05
+5V REGULATOR
+5V
PRIMARY COIL CONTROL C.B.A.
R103
D101
IC101
M51976FP
VCC
STARTER CIRCUIT
CURRENT LIMIT
OVERLOAD DETECTOR
OUTPUT AMP
OVER VOLTAGE PROTECTOR
SAWTOOTH WAVEFORM GENERATOR
PWM COMPARATOR
FEEDBACK DETECTOR
D102
5.1V
C105
PC01
LED C.B.A.
CHARGE 2 LED
CHARGE 1 LED
POWER LED
D302
D301
D300
R27
CHARGE CONTROL C.B.A.
D202
5.1V
R207
QR204
CHARGE FULL: ON
Q201
CHARGE: ON
R208
QR201
NORMAL: ON
QR203
CHARGE FULL: ON
QR205
CHARGE FULL: ON
QR202
R226
R225
R227
Q202
Q203
IC202
MN1551VBPS
CHARGE OUT 1 Ⓛ
CHARGE OUT 2 Ⓛ
DC OUT NORMAL: Ⓗ CHARGE: Ⓛ
Q204
Q205
BATTERY CONNECT DETECTION 1
BATTERY CONNECT DETECTION 2
CHARGE CURRENT CONTROL QUICK Ⓛ TRICKLE Ⓜ
OSC
X01
BATTERY VOLTAGE A/D CONVERTER
VDD
+5V
LADDER RESISTOR 1
LADDER RESISTOR 8
CHARGE LED 2 Ⓛ
CHARGE LED 1 Ⓛ
IC201
AN6564NS
NORMAL/CHARGE CURRENT CONTROL
CHARGE CURRENT CONTROL
TEMPERATURE DETECTOR
CHARGE VOLTAGE DETECTOR
D201

Schaltbild des Netzadapters
Power Adaptor Schematic Diagram


VEP61085A
F1 250V T1A XBA2C10TBO
S1 EST15702V
AC100V – 240V 50/60Hz
L3 ELF18D290A
D1 S1WBA60S
R1 330K ½W
ZNR1 ENB461D-05A
C5 250V~ 0.1
C27 VCC0018
L2 ELF18D293C
PC1 PCNLA
D3 AK04 or ERA82-004
R10 47
R9 220
C7 250V 2200P
C6 250V 2200P
C8 250V 2200P
C26 250V 2200P
L7 VLP0064 or VLP0067
L8 VLP0064 or VLP0067
R2 82K
R3 82K
R4 82K
R5 82K
C10 400V47
C11 250V0.1
C12 1KV47P
R6 33K 2W
R7 33K 2W
D2 ERA22-08 or AP01C
Q1 2SK1198 or 2SK903 (SW CTL)
R8 0.82 1W
T1 VLT0526
P1 P2 B1 B2 S1 S2 S3 S4
L5 VLP0043
D7 F5KF20
TF1 VSF0084
C9 500V 150P
L6 VLP0043
C16 25V470
C17 25V470
D4 MA4270
R11 39K
D101 MA151K
R101 82K
R102 360 2%
R108 150
C105 0.18
C106 0.1
D102 MA3051LM
R12 18K
D5 ERA22-04
D6 ERA22-04
R24 22
C13 500V100P
C14 35V33
C15 35V100
C101 25V 0.1
R104 22K
IC101 M51976FP
START/STOP
HEAT PROTECT
ON/OFF
SECONDARY POWER CONT.
LATCH
DRIVE
PULSE
GND
P·W·M
OSC
OSC OFF DET.
RESET GENERATOR
LATCH
ICP ⊖ DET.
ICP ⊕ DET.
TIMER
LOW OUT VOLTAGE DET.
R105 22K
C102 50V470P
R103 4700 2%
R106 15K 2%
R107 100 2%
C104 25V 0.47
C103 50V 2200P
VEP60050D
D15.D19 ERA22-04 or VSD0001
D15
D19
C21 35V27
R25 47
IC1 AN78L05 or UPC78L05
+5V REGULATOR
C18 16V10
R13 330
R29 0.1 2W
L4 VLQ0292
R14 27K ±2%
R23 10
C20 25V 470
D8 MA4075M
R15 180
R16 820
Q2 2SB953P (DC OUT·ON)
Q3 2SB953P (CHARGE OUT1·ON)
Q5 2SD1458 (DC OUT) (⊕·ON)
Q6 2SD636 (CHARGE OUT1·ON)
Q4 2SB953P (CHARGE OUT2·ON)
Q7 2SD636 (CHARGE OUT2·ON)
R17 10K
R18 10K
R19 100 ½W
R20 180 ½W
R21 180 ½W
R26 220
D9 31DQ04
D10 D3S4M or 31DQ04
D11 MA165
D12 MA165
D13 MA165
D14 MA165
D16 6.2V MA4062L
D17 6.2V MA4062L
D18 6.2V MA4062L
D20 11ES1
D21 11ES1
C24 50V0.01
C25 50V0.01
R22 0.22 2W
P1 CHG1 ⊕ CHG1 ⊖ TO CHG1 BATTERY HOLDER
P2 CHG2 ⊕ CHG2 ⊖ TO CHG2 BATTERY HOLDER
DC VJJ0174
C19 16V10
X1 VSX0094
VEP60051C
D201 MA151WA
C201 0.1
R203 56K
R204 1000
C202 0.1
IC201 AN6564NS or μPC324G2
VCC GND
R210 6800
R211 5600
R212 5600
C203 1000P
C204 0.22
R214 220K
R213 6.8K
R216 10K
R215 6.8K
R239 1K
R238 2K
R207 39K ±2%
D202 MA3051M
R240 47K
D203 MA151K
R208 22K
R209 22K
Q201 2SD601 (CHARGE·ON)
QR201 UN2214 (DC OUT ⊕·ON)
R218 1K
R219 10K
Q202 2SD601 (INV.)
R220 1K
R221 10K
Q203 2SD601 (INV.)
R222 82K
D204 MA151K
C22 6.3V47
IC202 MN1551VMY or MN1551VBPS
VDD
P52 Io(0.6A)
P53 +BON⊕
P40 A/D(BATT)
P41 A/D (TEMP)
P42 7.2V/9.6V
P00 P01 P02 P03 P10 P11 P12 P13
VSS
OSC1
OSC2
RST
Io(1.1A) P51
Io(0.2A) P50
CHG OUT2⊖ P33
CHG OUT1⊖ P32
CHG LED2⊖ P31
CHG LED1⊖ P30
BATT2 ON⊕ P23
BATT1 ON⊕ P22
MADE OFF⊖ P21
0.6A/1.1A P20
C208 0.1
R241 10K
D206 MA3047LM
R217 EXBM16D8BLJ
QR203 UN2214
QR204 UN2214
QR205 UN2214
R27 68K
C206 27P
C207 27P
R223 10M
R224 220K
QR202 UN2122 (CHARGE CTL)
R225 15K
C23 6.3V10
R226 6800
R227 330
R236 1K
R228 1K
R229 10K
R232 1K
R237 1K
Q204 2SB709A (BATTERY CONNECT DET.)
R233 10K
Q205 2SB709A (BATTERY CONNECT DET.)
R234 5600
R230 5600
R235 10K
D207 MA3047 L.M
R231 10K
D208 MA3047 M.L
R300 470
R303 470
R302 1000
R301 1000
D300 LN81RCPHL
D302 LN81RCPHL
D301 LN81RCPHL
+5V
CHG LED1 Ⓛ
CHG LED2 Ⓛ
GND
VEP60049A

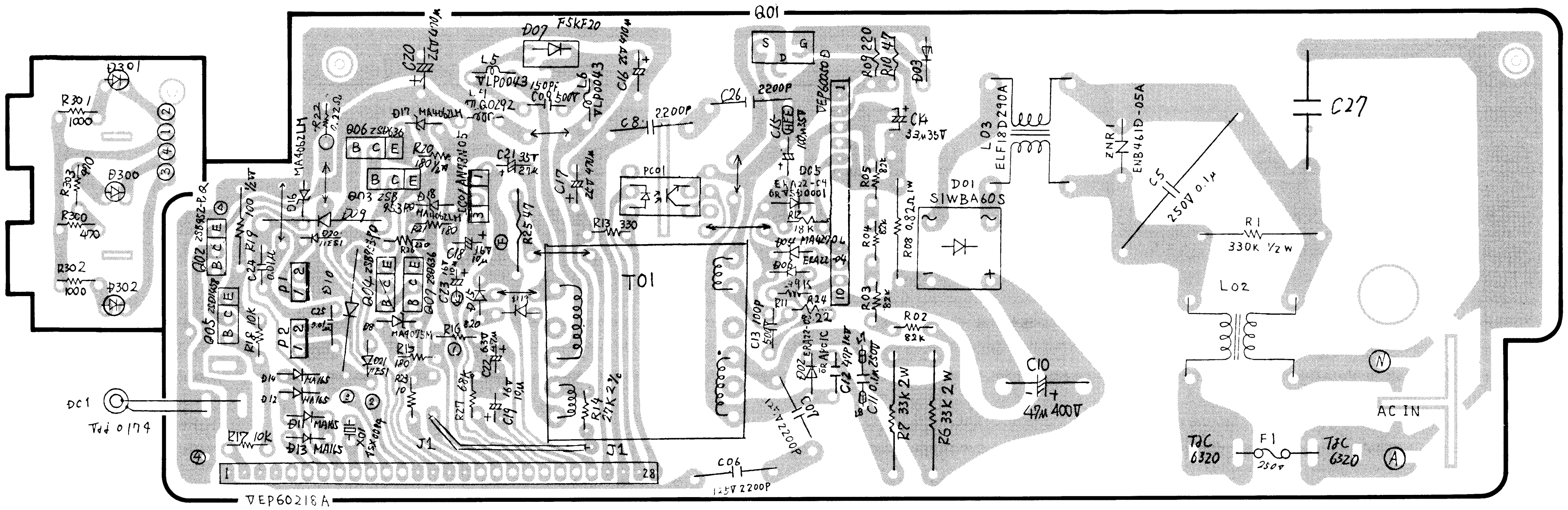
⚠ Sicherheitsbauelement (muß durch Originalteil ersetzt werden).
Security component (must be replaced by original part).

Für Werte ohne Bezeichnung F (μF) oder Ω einsetzen.
Read F (μF) or Ω, respectively unless otherwise noted.

Platinen des Netzadapters
Power Adaptor Circuit Boards

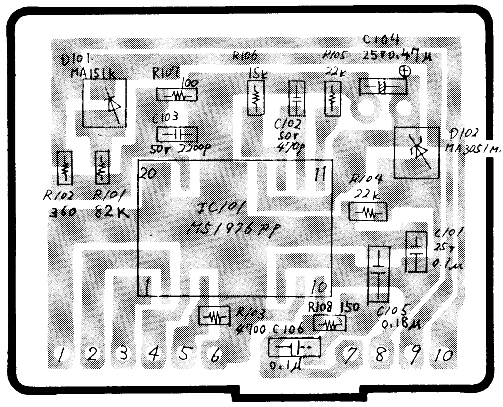
LED-Platine
LED C.B.A.

Hauptplatine
Main C.B.A.



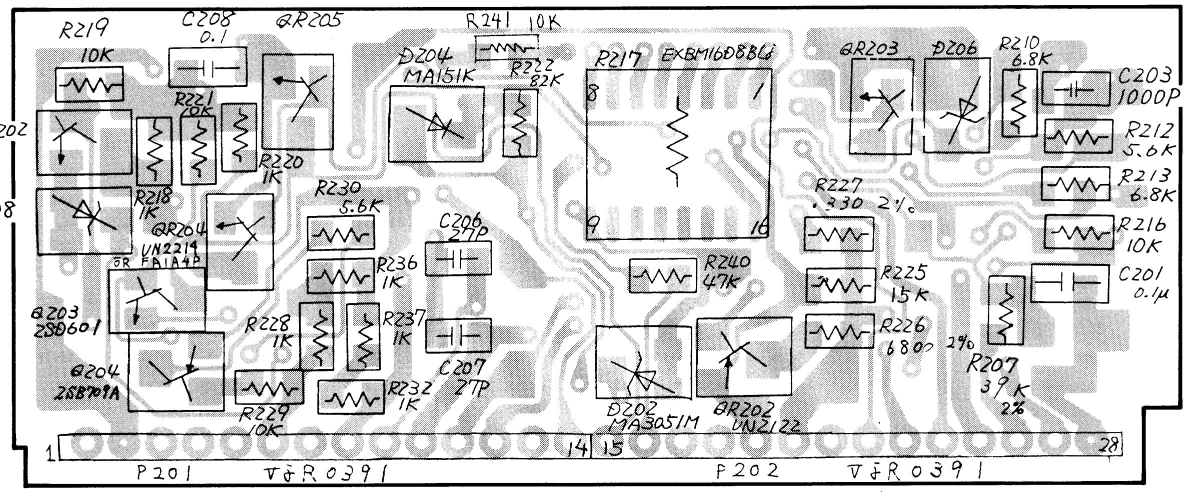
D301
R301 1000
D300
R303 470
R300 470
R302 1000
D302
DC1
Q01
D07 FSKF20
L5 TLP0043
C9 150P 500V
C8 2200P
C26 2200P
PC01
T01
J1
C27
R1 330K 1/2W
L02
C10 47μ 400V
D01 S1WBA60S
L03 ELF18D210A
ZNR1 ENB461D-05A
C5 250V 0.1μ
AC IN
F1 250V
T3C 6320
C06 2200P
R7 33K 2W
R6 33K 2W
R02 82K
R17 10K
D11 MA115
D13 MA115
VEP60218A
28

Primär-Steuerplatine
Primary Control C.B.A.



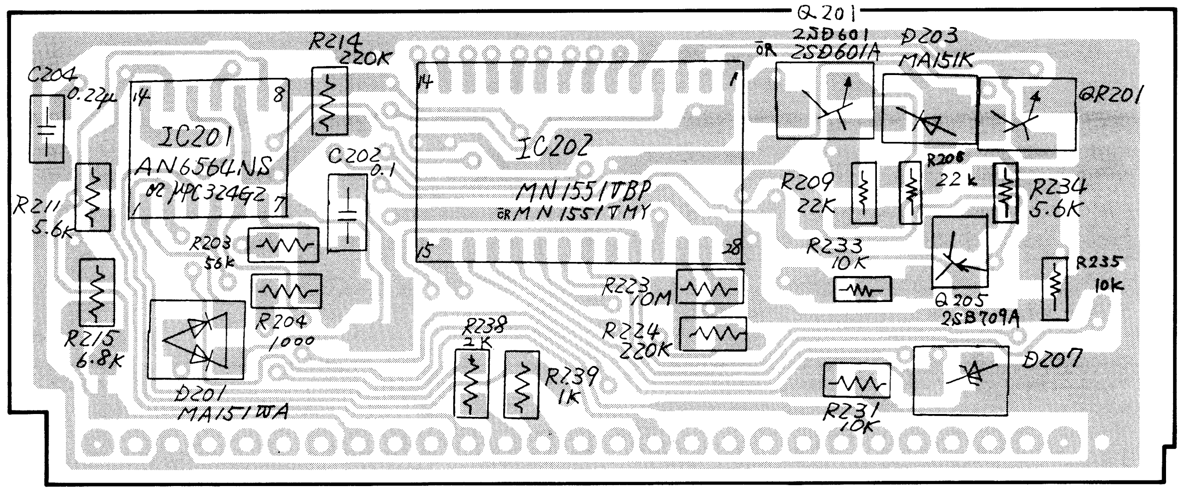
C104
D101 MA151K
R107
R106
R105 22K
C103 50V 3300P
C102 50V 470P
D102 MA3051M.H.L.M
R102 360
R101 62K
IC101 MS1976PP
20
11
1
10
R104 22K
C101 25V 0.1μ
R103 4700
C106 0.1μ
R108 150
C105 0.18μ
1 2 3 4 5 6 7 8 9 10

Sekundär-Steuerplatine
Secondary Control C.B.A.



R219 10K
C208 0.1
QR205
R241 10K
D204 MA151K
R222 82K
R217 EXBM16D8BLJ
QR203
D206
R210 6.8K
C203 1000P
Q202
R221 10K
R220 1K
R212 5.6K
R213 6.8K
D208
R218 1K
QR204 UN2214 ÕR FA1A4P
R230 5.6K
C206 27P
R227 .330 2%
R216 10K
C201 0.1μ
Q203 2SD601
R236 1K
R240 47K
R225 15K
R228 1K
R237 1K
R226 680 2%
Q204 2SB709A
C207 27P
R232 1K
D202 MA3051M
QR202 UN2122
R207 39K 2%
R229 10K
P201 VEP0391
P202 VEP0391
1
14 15
28

COMPONENT SIDE (Bestückungsseite)



Q201 2SD601 ÕR 2SD601A
D203 MA151K
QR201
C204 0.22μ
R214 220K
IC201 AN6564NS ÕR μPC324G2
14 8 1 7
C202 0.1
IC202 MN1551TBP ÕR MN1551TMY
14 1 15 28
R211 5.6K
R203 56K
R209 22K
R206 22K
R234 5.6K
R233 10K
R235 10K
R204 1000
R223 10M
Q205 2SB709A
R215 6.8K
D201 MA151WA
R238 1K
R239 1K
R224 220K
R231 10K
D207

FOIL SIDE (Lötseite)

Spannungstabelle PC-8800
PC-8800 Voltage Chart

REF. NO.	IC1																	
MODE	1	2	3															
	16.1	0	5.0															

REF. NO.	IC101																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	14.0	0.4	0	3.0	0	0	0	0	0	1.0	4.6	3.2	3.5	1.1	0	0	0	0

REF. NO.	IC101																	
MODE	19	20																
	0	0																

REF. NO.	IC201																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
	9.6	5.2	5.2	15.9	0.3	0.1	14.7	14.5	2.2	5.0	0	5.0	0.7	14.5				

REF. NO.	IC202																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	5.0	5.0	4.8	4.1	4.0	0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0	0	0	0

REF. NO.	IC202																	
MODE	19	20	21	22	23	24	25	26	27	28								
	4.4	4.4	0.7	0.7	5.0	0.1	5.0	2.5	1.7	0								

REF. NO.	Q1			Q2			Q3			Q4			Q5			Q6		
MODE	D	S	G	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
	145.2	0	0.3	11.7	11.7	11.0	11.7	15.6	11.3	11.7	14.7	11.3	3.5	11.0	4.0	0	11.3	0

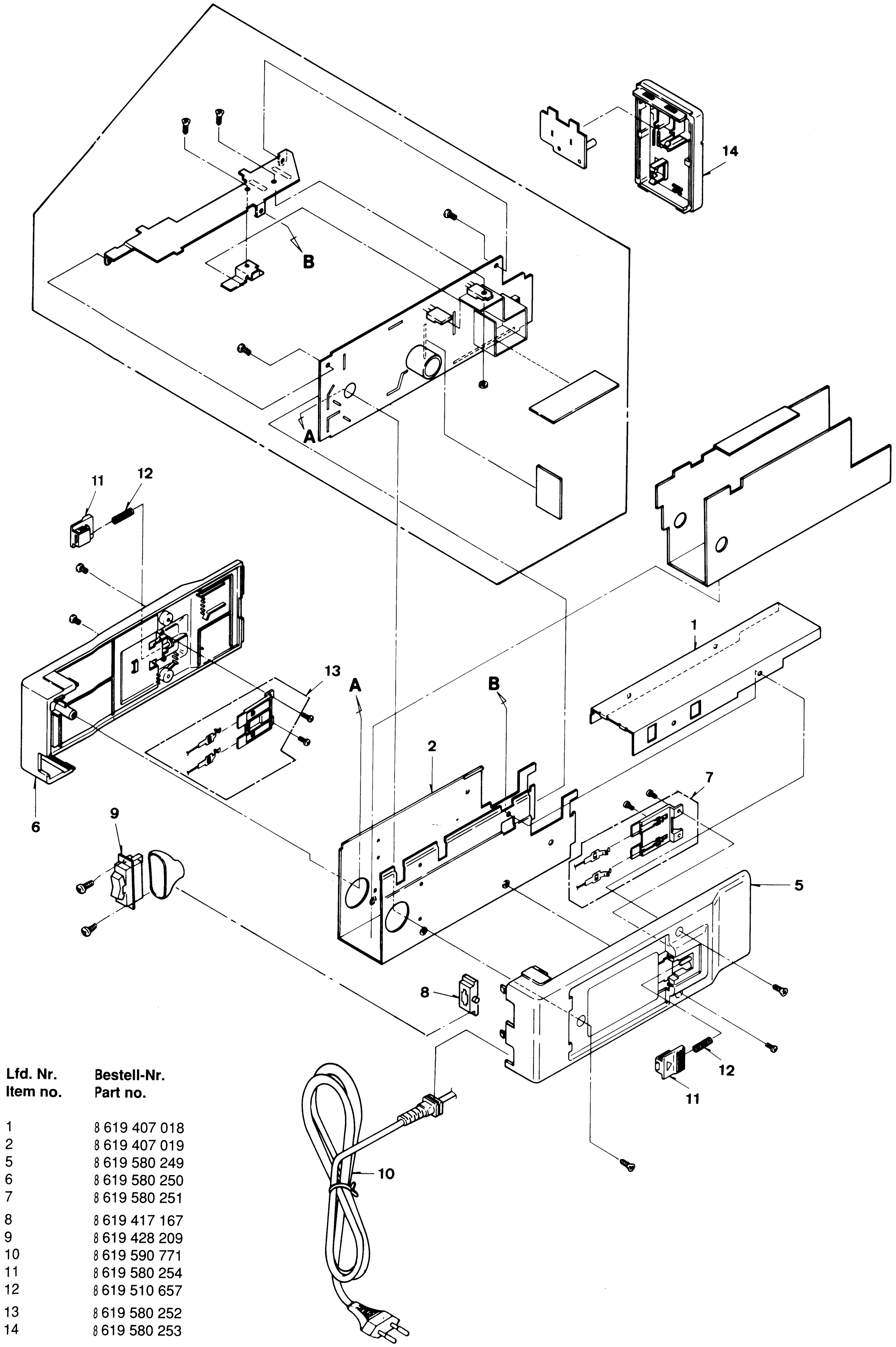
REF. NO.	Q7			Q201			Q202			Q203			Q204			Q205		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
	0	11.3	0	0	5.2	0	0	0	0.7	0	0	0.7	16.1	0	16.1	16.1	0	16.1

REF. NO.	QR201			QR202														
MODE	E	C	B	E	C	B												
	0	0	4.8	5.0	0.1	0.1												

Gleichspannungen Tol. ± 15 % mit Digitalvoltmeter gegen Masse gemessen (Primär = D 1 „–“ / Sekundär = Minusanschluß).
DC voltages tol. ± 15 % measured with digital voltmeter against ground (primary = D 1 "–" / secondary = minus connector).

Explosionszeichnung
Exploded View

PC-8800



Lfd. Nr. Item no.	Bestell-Nr. Part no.
1	8 619 407 018
2	8 619 407 019
5	8 619 580 249
6	8 619 580 250
7	8 619 580 251
8	8 619 417 167
9	8 619 428 209
10	8 619 590 771
11	8 619 580 254
12	8 619 510 657
13	8 619 580 252
14	8 619 580 253

Ersatzteilliste

Spare Parts List

Hauptplatine mit Sekundär-Steuerplatine
Main C.B.A. with Secondary Control C.B.A.

Position Position	Bezeichnung Designation	Bestell-Nr. Part no.
C 5	0,1 µF 250 V	8 942 210 511
C 6	2200 pF 250 V	8 942 210 319
C 7	2200 pF 250 V	8 942 210 319
C 8	2200 pF 250 V	8 942 210 319
C 10	47 µF 400 V	8 943 499 159
C 12	47 pF 1 kV	8 942 247 108
C 20	470 µF 25 V	8 943 499 096
C 26	2200 pF 250 V	8 942 210 319
C 27	220 pF 400 V	8 942 899 286
D 1	S1 WBA 60 S	8 945 405 846
D 2	AP 01 C	8 945 405 930
D 3	ERA 82-004	8 945 405 682
D 4	MA 4270 L	8 945 405 835
D 5	ERA 22-04	8 945 405 838
D 6	ERA 22-04	8 945 405 838
D 7	F 5 KF 20	8 945 406 182
D 8	MA 4075 M	8 945 421 226
D 9	RU 4 YX-LF	8 945 406 262
D 10	RU 4 YX-LF	8 945 406 262
D 11	MA 165	8 905 421 098
D 12	MA 165	8 905 421 098
D 13	MA 165	8 905 421 098
D 14	MA 165	8 905 421 098
D 15	ERA 22-04	8 945 405 838
D 16	MA 4062 M	8 945 405 837
D 17	MA 4062 M	8 945 405 837
D 18	MA 4062 M	8 945 405 837
D 19	ERA 22-04	8 945 405 838
D 20	11 ES 1	8 945 405 679
D 21	11 ES 1	8 945 405 679
D 101	MA 151 K	8 945 405 226
D 102	MA 3051 M	8 945 405 840
D 201	MA 151 WA	8 945 405 707
D 202	MA 3051 M	8 945 405 840
D 203	MA 151 K	8 945 405 226
D 204	MA 151 K	8 945 405 226
D 206	MA 3047 M	8 945 405 815
D 207	MA 3047 M	8 945 405 815
D 208	MA 3047 M	8 945 405 815
DC 1	(DC-BUCHSE)	8 619 428 609
F 1	1 A / 250 V	1 904 521 436
IC 1	AN 78 N 05	8 945 900 423
IC 101	M 51976 FP	8 945 902 094
IC 201	UPC 324 G 2	8 945 901 937
IC 202	MN 1551 VMY	8 945 902 701
L 2		8 619 530 015
L 3	29 µH	8 619 437 010
L 4	33 µH	8 619 437 011
L 5		8 619 434 038
L 6		8 619 434 038
L 7		8 619 438 016
L 8		8 619 438 016
PC 1	PC 111 A	8 945 705 726
Q 1	2 SK 903	8 945 705 744
Q 2	2 SB 953-Q	8 925 705 416
Q 3	2 SB 953-Q	8 925 705 416
Q 4	2 SB 953-Q	8 925 705 416
Q 5	2 SD 1458	8 945 705 277
Q 6	2 SD 636	8 905 705 604
Q 7	2 SD 636	8 905 705 604
Q 201	2 SD 601	8 925 820 030
Q 202	2 SD 601	8 925 820 030
Q 203	2 SD 601	8 925 820 030
Q 204	2 SB 709 A	8 945 705 364
Q 205	2 SB 709 A	8 945 705 364
QR 201	FA 1 A 4 P	8 945 705 928
QR 202	UN 2122	8 945 705 712
QR 203	FA 1 A 4	8 945 705 928
QR 204	FA 1 A 4	8 945 705 928
QR 205	FA 1 A 4	8 945 705 928
R 6	33 kΩ 2 W	8 940 599 352
R 7	33 kΩ 2 W	8 940 599 352
R 8	0,82 Ω 1 W	8 940 599 408
R 22	0,22 Ω 2 W	8 940 599 703
R 25	47 Ω 2 W	8 940 599 355
R 26	220 Ω 1 W	8 940 599 564
R 29	0,1 Ω 2 W	8 940 599 704
R 217	Array	8 940 599 381
T 1		8 619 530 222
TF 1		8 619 580 004
X 1		8 906 193 053

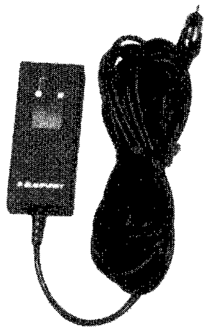
Notizen / Memo

BLAUPUNKT
Bosch Telecom

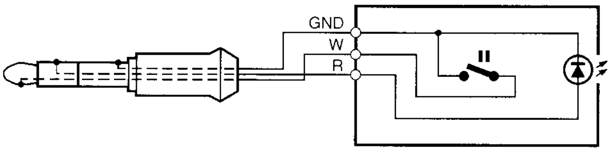
Zubehör - Sonderzubehör
Accessories - Optional Accessories

Kundendienstschrift • Service Manual

Kabelfernbedienung / Pause Remote Control



WRX-1000



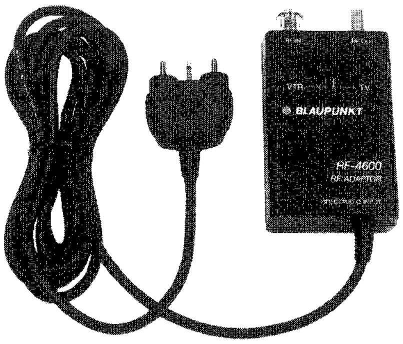
Bezeichnung Designation	Bestell-Nr. Part no.
LED VLL 0031	8 945 405 378
Taster / Switch VSP 0178	8 619 420 206

Mit der Pausen-Kabelfernbedienung WRX-1000 kann die Aufnahme-Start/Stop-Funktion des Camerarecorders fernbedient werden. Die Aufnahme-Kontrollampe an der Pausen-Kabelfernbedienung leuchtet während der Aufnahme.

By means of the pause remote control WRX-1000 the record-start/stop function of the camcorder may be operated by remote control. During recording the record control lamp of the pause remote control is lit.

HF-Adapter / RF Adaptor

Keine Ersatzteile lieferbar.
No spare parts available.

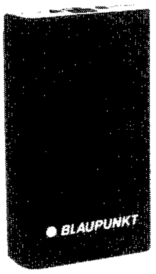


RF-4600

Dieser HF-Adapter ermöglicht den Anschluß der CR-8800 H an ein Fernsehgerät ohne Video-/Audio-Eingangsbuchse.

By using this RF adaptor it is possible to connnect the CR-8800 H to a TV set without Video/Audio input sockets.

Akku / Battery Pack



AX-8000

Technische Daten / Specifications:

AX-8000 = 7,2 V / 1,0 Ah

Dieser Akku dient als Stromversorgung für die CR-8800 H. Die Aufladung erfolgt mit dem Netzadapter PC-8800.

Hinweise zur Behandlung und Lagerung von Ni-Cd-Akkumulatoren

1. Vor der ersten Inbetriebnahme muß der Akku geladen werden.
2. Den Akku immer so lange verwenden, bis er ganz entladen ist. (Es leuchtet dann die Warnanzeige „BATT", und der Camerarecorder schaltet ab.) Wenn ein nur teilweise entladener Akku wiederholt geladen wird, kann es dazu kommen, daß die Betriebszeit des Akkus immer kürzer wird.
3. Die in der Anleitung und in Katalogen angegebene Akku-Betriebszeit gilt nur für den Fall, daß durchgehend bei normaler Zimmertemperatur aufgenommen wird. Da dies nicht immer den tatsächlichen Bedingungen entspricht, sollte mit einer kürzeren Betriebszeit gerechnet werden.
4. Eine besondere Wartung der Akkus ist nicht erforderlich, sie sind wartungsfrei. Allerdings sollten die Akkus vor Feuchtigkeit, Verunreinigung und vor zu hohen Temperaturen, z.B. direkte Sonneneinstrahlung, geschützt werden.
5. Die Lagerung von Ni-Cd-Akkus kann in jedem Ladezustand, also auch entladen, erfolgen. Der beste Lagertemperaturbereich ist 0° bis 25°C bei einer normalen Luftfeuchtigkeit von ca. 50%.
6. Die Selbstentladung von Ni-Cd-Akkus wird sehr stark von der Temperatur beeinflußt; sie ist bei Temperaturen unter 0°C am geringsten. Bei hohen Temperaturen und hoher Luftfeuchtigkeit, wie auch bei längerer Lagerung der Akkus, ist mit Selbstentladung zu rechnen.
7. Die folgenden Punkte beachten, um Gefahren bzw. Beschädigungen zu vermeiden.
   - Den Akku nicht ins Feuer werfen.
   - Die Anschlußkontakte nicht kurzschließen.
   - Den Akku nicht auseinandernehmen oder Änderungen daran vornehmen.
   - Nur den mitgelieferten Netzadapter zum Aufladen der Akkus verwenden.
   - Den Akku keinen starken Stößen aussetzen und nicht fallen lassen.
8. Der Akku kann beim Betrieb oder Aufladen warm werden, dies ist völlig problemlos.

Schützen Sie die Umwelt !
Verbrauchte Batterien und Akkus
gehören nicht in den Hausmüll !

Bitte bei Ihrem Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.

This battery pack serves for current supply of the CR-8800 H. It is charged via the power adaptor PC-8800.

Indications for treatment and storage of Ni-Cd accumulators

1. The battery pack must be charged before using it for the first time.
2. Always use the battery pack until it is discharged completely (until the warning indication "BATT" lights up and the camcorder switches off). Frequent charging of only partially discharged battery packs, may reduce the operating time of the battery.
3. "Battery life" as indicated in the instruction manual or catalogue of the camcorder is measured by the continuous recording time of the camcorder, placed at a room temperature using a full-charged battery.
4. The battery packs do not require spezial maintenance, they are maintenance-free. However, the battery packs should be protected from humidity, dirt and from high temperature, e. g. direct sunlight.
5. The Ni-Cd battery packs can be stored in any charging condition, including discharged condition. The optimum temperature range for storing is 0° to 25°C and a normal relative humidity of 50%.
6. The self-discharge of battery packs depends largely on the temperature; at temperatures below 0°C it is greatly minimized. At high temperatures and high humidity as well when storing for long periods, self-discharging may occur.
7. Pay attention to the following points to avoid danger or damage.
   - Do not throw the battery pack into fire.
   - Do not short-circuit the poles of the connector.
   - Do not disassamble or reconstruct the battery pack.
   - Use only the supplied power adaptor to charge battery packs.
   - Never subject the battery packs to strong shocks or drop them.
8. During operation of the camcorder or during recharging, the battery pack may become warm. However, this does not pose any problem.

Protect the Environment !
Do not discard used batteries with
your household rubbish !

Please return them to your dealer, or bring them to a collecting point for spezial substances.

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